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CHAPTER I

BACKGROUND TO THE ECONOMY

A prominent feature of the Indian economy is the predominance of agriculture in the production structure. This characteristic has persisted despite appreciable development of manufacturing industry in the past few decades. Industrial progress has however not been rapid enough to absorb an increasing proportion of a population which was growing rapidly. In addition growth of large-scale industry has affected the village industries adversely and added to the pressure on land. As a consequence the proportion of the population depending on land for their livelihood has remained as high as 70 per cent.

2. Such a distribution of manpower would not have had deleterious effects on the standard of living had there been rapid and continuous progress in the agricultural sector. But the position in India is one of chronic stagnation in agriculture. The area of land under cultivation has increased only slightly in the past three or four decades. As against this yields per acre have fallen so that total production of main crops has shown a tendency to fall. The area under rice, for instance, rose from an average of 66·4 million acres in 1914-19 to an average of 68·5 million acres in 1934-39, whereas the corresponding average production fell from 26·7 million tons to 24·5 million tons. In the same period, average annual production of wheat remained stationary at 7·9 million tons despite an increase in acreage from 24 to 25·9 million. Areas under bajra and maize fell causing an even steeper reduction in their out-turn. In the case of cotton, the average annual acreage fell from 26·4 million in 1924-29 to 24·7 million in 1934-39, and the annual production from 1·03 million tons to ·98 million tons. Similarly, for jute the average area and the annual production fell from 3·2 million acres and 1·7 million tons in 1924-29 to 2·6 million acres and 1·4 million tons in 1934-39. This continuous downward trend in agricultural production coupled with the rapid increase in population has intensified the pressure on the means of livelihood, and led to a persistence of low standards of living in the country as a whole. Despite the impetus given to industrial production by the first world war, *per capita* income was as small as Rs. 65 per annum in 1931-32. And in 1947-48, it was about Rs. 272, which, considering the higher level of prices in that year, amounted to an increase of only 14 per cent. over the period.

3. On the industries side, the first world war and the inter-war period witnessed considerable progress. Special mention may be made here of the growth of the iron and steel and cement industries, which, along with cotton, sugar, matches, etc., benefited from the isolation of the Indian and Far Eastern markets during the war, and from the protectionist policy adopted thereafter. The production of iron and steel increased from an almost negligible amount in 1914 to over 400,000 tons in 1929 and nearly 800,000 tons by 1939. In the case of cement, the progress was spectacular; output increased from about 780,000 tons in 1934-35 to over 1·5 million tons in 1939, which was equivalent to about 98 per cent. of domestic consumption. Consumption goods industries like cotton textiles and sugar also expanded rapidly. Total employment in organised industries amounted, however, to only $\frac{2}{3}$ of 1 per cent. of the population and the trend towards an increasing dependence on agriculture noticed since the beginning of the century continued. Thus the industrial development of this period did not contribute materially towards bringing about a better balance either between agriculture and manufacturing industry as a whole, or between consumption goods industries and capital goods industries.

4. The outbreak of World War II led to an unparalleled strain on India's resources. The economy failed to respond adequately to the stimulus of war demands. In agriculture, the output of foodgrains was increased

mainly at the expense of non-foodcrops like cotton and jute (which diversion had severe repercussions on the textile industry in the post-war and post-partition phases). Despite such diversion, the production of foodstuffs at no time exceeded 10 to 15 per cent. over the pre-war output, and this increase was insufficient to meet the extra demand. Military consumption of foodgrains increased from 48,000 tons in 1938-39 to 625,000 tons in 1943-44, of sugar from 5,000 to 105,000 tons, and of tea from 1 million to 35 million lb. As a consequence of this draft on the supply of consumer goods and the reduction of imports, serious shortages developed in the civilian sector. Expanding money incomes in all sectors of the economy built up strong inflationary forces within the country. To check the rise in prices and secure a more equitable distribution of essential foodstuffs and raw materials, rationing of certain commodities in the urban areas and price control were introduced. These measures succeeded in slowing down the price increases; the index of food prices at the end of the war was around 248 (base : year ended August, 1939=100).

The response of the industrial sector to the war demands was, on the whole, better than in agriculture. The production of arms, ammunition and military equipment increased rapidly. There was also a marked increase in the number and output of small engineering establishments. In the case of large-scale industries, however, limitation of capital equipment confined the increase in outputs to levels which could be attained by a more intensive utilisation of installed capacity. In the peak years, outputs of finished steel and cement were up by 35 per cent. and 47 per cent. respectively compared to 1938-39. Similarly, the production of paper increased from a monthly average of 110·9 thousand cwt. in 1939 to 163·7 thousand cwt. in 1945. The average monthly output of sugar which had fallen from 92·8 thousand tons in 1938 to 57·9 thousand tons in 1939, reached a peak level of 100·8 thousand tons in 1941, but fell again to 80·6 thousand tons in 1945. Production of cotton piece goods increased from a monthly average of 343 million yards in 1939 to the peak level of 404 million yards in 1944, an increase of less than 18 per cent. The output of jute manufactures, however, fell from a monthly average of 105·5 thousand tons to 90·5 thousand tons. But as in the case of consumption goods, the off-take for military purposes of iron and steel and cement increased tremendously. In 1943-44, 812,000 tons of iron and steel (83 per cent. of total production) and 1·3 million tons of cement (62 per cent. of total production) were thus absorbed, causing, amongst other things a serious shortage of construction materials in the civilian sector.

The war also imposed a heavy strain on the railways, which is reflected in the figures for passenger-miles and for goods-ton miles during the war years. From about 18·7 million in 1938-39 passenger-miles increased to over 41·3 million in 1945-46, while in the same period, goods-ton miles rose from 22·2 million to 29·2 million. This was in addition to the movement of military personnel and stores. Concurrently with this tremendous increase in the use of the railway services, there was a reduction in the rolling stock following the export of engines and wagons to several theatres of war. By the end of the war, rolling stock and equipment in railways had deteriorated seriously.

The appreciable increases in output in the industrial and transport sectors were largely achieved by a more intensive utilisation of existing capital equipment. (Imports of machinery and mill work fell from about Rs. 20 crores in 1938-39 to almost half the figure by 1942-43). This had the effect of increasing greatly the depreciation of capital equipment on the one hand, and on the other, of limiting the increase in employment in the industrial sector.

Thus by the end of the war, the Indian Economy had reached a state full of dangerous possibilities. Government expenditure had reached a level never witnessed before ; money incomes and prices had increased greatly ; agricultural production had become practically inelastic; the expansion

in the industrial sector had been achieved at the expense of capital equipment, thus jeopardising future production and paving the way for serious shortages in supplies later on. On top of it all, the continued surplus in the balance of payments during the war years had added tremendously to the inflationary potential. India thus entered the post-war period with an economy seriously out of joint.

5. After the war, the strain of the war period on industrial and transport equipment brought about a decline in production and a slowing down of the movement of goods, thus intensifying the disequilibrium in the economy. The cessation of hostilities did not mean an immediate reduction in Government expenditures on its own defence account or on behalf of the Allies, so that the war-time shortages in the civilian sectors continued. The measures adopted during the war period to prevent a run-away inflation of prices and costs were not relaxed. On the other hand, attempts were made to initiate schemes for increasing production in the several sectors. Imports of railway and industrial equipment were stepped up, by utilising to some extent the large foreign exchange reserves built up during the war. The value of imported machinery of all kinds increased from a monthly average of Rs. 16 million in 1945 to Rs. 26 million in 1946, and to Rs. 87 million in 1949 ; and of vehicles (excluding locomotives) from Rs. 6·2 million in 1945 to Rs. 13·7 million in 1946, and Rs. 24 million in 1949. But shortages in foodstuffs, cotton textiles, construction materials, and many other commodities persisted, and the overall strain on the economy continued unabated.

6. Before the maladjustments inherited from the war period could be corrected, the economy suffered a further shock from the Partition in August, 1947. The Government had to spend as much as Rs. 233 million on the relief and rehabilitation of refugees. In the two years following Partition, loans amounting to Rs. 150 million have been given to the refugees to enable them to make a fresh start. Besides the dislocation caused by the large movements of populations, Partition meant the loss to India of important food and raw material producing areas. The canal colony lands of the Punjab and Sind in which the greatest agricultural developments had taken place in the last half a century, as well as the jute growing areas of Bengal went to Pakistan. Pakistan's share of the population of undivided India was about 18 per cent., while it got 80 per cent. of the total production of jute, 40 per cent. each of the total production of cotton and wheat, and 28 per cent. of undivided India's output of rice. Partition, in effect, made the Indian Union dependent on imports of raw materials and foodstuffs as never before, and added to the imbalance in the country's international accounts position.

Imports to supplement domestic production of consumer goods has been particularly rendered difficult on this account since 1948. Nevertheless, considerable amounts of foodstuffs have had to be imported in both 1948 and 1949. At the same time, measures to increase domestic production, particularly in agriculture, were undertaken. Work on several minor irrigation projects was speeded up. Arrangements were made to supply fertilisers and good quality seeds cheaply. The Government also provided financial and technical assistance to farmers. Apart from these, work was also commenced on several projects designed to increase agricultural output in the long-run. Chief amongst these were multi-purpose projects and the manufacture of fertilisers. The multi-purpose schemes now on hand are : the Damodar Valley Project, the Bhakra-Nangal Project and the Hirakud Dam Project. The estimated Government investment on these projects is about Rs. 2620 millions, and when completed they would make a big addition to the area under cultivation, the generation of electric power and to the navigable canal-miles. The following figures indicate the magnitude of these projects in real terms. The Bhakra-Nangal Project will irrigate every year 3·6 million acres of land and make possible the generation of 270,000 K. W. of electricity. The Damodar Valley Project will result

in the irrigation of approximately 1 million acres of land, and produce about 345,000 tons of extra foodgrains. Electricity generated will have a maximum capacity of 440,000 K. W. Considerable progress has been made in respect of these projects and plans for the remaining work are ready. While these projects are intended to increase and stabilise agricultural production by extending the area under irrigation, efforts to halt the downward trend in yields per acre include the provision of fertilisers and technical advice. The Sindri Fertiliser Factory which is in the process of installation, and which should start production in the near future, will raise the annual output of fertilisers from 55,000 tons to about 350,000 tons. But the soil in India has been consistently under-nourished and the need for fertilisers is much greater than can be met from these sources.

7. Measures have also been taken to stimulate industrial production. In the field of capital goods industries, factories have been set up by Government for the manufacture of aircraft and locomotives. To stimulate development of industries like shipping and civil aviation, the Government has provided direct assistance through a system of joint participation in finance and management. And in order to stimulate investment in industries which will be left under private ownership and management, the relief from taxation and such other concessions have been provided.

Despite all this, progress on both industrial and agricultural fronts has been slow. The persistently low average standards of living, the high prices of foodstuffs and raw materials, the shift in the distribution of incomes during the war period, the general state of stagnation in the capital market have all tended to obstruct the flow of investment into fields of production which badly need to be developed.

8 The problem of the Indian economy at this stage, therefore, is to organise for a considerably increased flow of goods and services especially of food and agricultural raw materials and some of the essential consumer goods like textiles. India has large material and manpower resources which are at present inadequately utilised. Capital available is admittedly insufficient to finance development on the desired scale. While the fullest possible mobilisation of domestic savings is an essential condition of progress, there is obviously need to supplement them by external finance.

CHAPTER II

THE PLAN DESCRIBED

9. This chapter gives a brief description of the Six-year (1951-57) Development Plan for India, prepared in terms of the resolution of the Sydney Conference. The plan has for its objectives :—

(*a*) the carrying out of a series of irrigation and multi-purpose projects which are expected to bring vast areas of land under cultivation, for the purpose of increasing the production of food and raw materials like cotton, in which there is a shortage of supply, both in India and in the rest of the world ;

(*b*) to improve facilities for transportation in the country ;

(*c*) to develop certain industries, mainly of the consumer goods type, *e.g.*, textiles, which will enable India to supply to the South-East Asia countries in particular the goods in which they are in short supply ;

(*d*) to reduce inflationary pressures and to re-create an atmosphere on the capital market such as would help stimulate saving and investment in the public as well as the private sectors ;

(*e*) to restore equilibrium in the country's international accounts position by eliminating as far as possible the very large imports of food and cotton which have become an important cause of disequilibrium in the country's balance of payments position ; and

(*f*) to provide for a certain desirable minimum of social investment for improving the standards of housing, health and education and more particularly the rehabilitation of refugees.

10. During the war and in the immediate post-war years, extensive plans of development were drawn up in the hope that resources would be available for putting them through. A recent review of the Plans which are worked out by the Central Ministries and are ready for execution if resources are available shows that their aggregate cost over the next six years would amount to Rs. 22,190 million. The estimated cost of schemes worked out by States Governments and certain Local Bodies amounts to over Rs. 10,000 million. The implementation of all these plans would thus involve an expenditure of about Rs. 32,190 million, *i.e.*, about Rs. 5,360 million per year on an average. An investment of this order in the public sector is now felt to be far in excess of the available resources. For purposes of the Six-year Plan as outlined here, all schemes which were not considered to be of immediate and vital importance for the attainment of the relatively short-term objectives in view, as also schemes in the relatively early stages of formulation, were omitted, so as to reduce to manageable proportions the gap between the expenditures involved and the resources likely to be available. The over-all cost of the Six-year Plan for the public sector as now envisaged is estimated to involve an expenditure of Rs. 18,400 million, which means a pruning of the estimates by about 43 per cent.

11. The main features of the Plan as it now emerges (*vide* Appendix II—Table "B") may be stated as follows :—

(*i*) Of the total investment of Rs. 18,400 million envisaged, the outlay by the Central Government would amount to Rs 12,566 million, *i.e.*, a little over 68 per cent. ; that by the States Governments would be Rs. 5,830 million or about 32 per cent. of the total.

(*ii*) The distribution of the projected expenditure as between the six major categories shown in Table "B" works out as follows :—

	Amount in million Rs.	*Percentage of total*
1. Agriculture (including Multi-purpose Projects)	6,080	33·0
2. Transport (including Communications)	7,027	38·2
3. Fuel and Power	576	3·2
4. Other Mining	15	
5. Industry	1,785	9·7
6. Social Capital	2,913	15·8
TOTAL	18,396 (*i.e.*18,400)	99·9 (*i.e.*100)

Of the expenditure of Rs. 6,080 million under "Agriculture" Rs. 3,341 million, or nearly 65 per cent., is accounted for by major irrigation and multi-purpose projects.

Under "Transport", the expenditure on Railways takes up Rs. 4,800 million, *i.e.*, about 68 per cent. of the total of Rs. 7,027 million proposed, two other major items being Roads—Rs. 1,099 million—and Posts and Telegraphs—Rs. 540 million.

The biggest item under "Social Capital" is Education, estimated to cost Rs. 1,144 million, *i.e.*, 39 per cent. of the total under this head. Rehabilitation of refugees from Pakistan is another big item—Rs. 750 million,

or 26 per cent. of the total. The provision for Health Services is put down at Rs. 515 million or nearly 18 per cent. of the total. These three items account for about 83 per cent. of the expenditure under "Social Capital".

The allocation to "Agriculture" and "Transport" of over 70 per cent. of the total projected expenditure leaving only about 10 per cent. for "Industry" and about 16 per cent. for "Social Capital" is an indication of the very high priority given in the Plan to schemes which would raise agricultural output and lay the foundations of an expanding rural economy. Besides, higher allocations for irrigation, multi-purpose projects and agricultural improvement have to be made since investment for these purposes has to be provided mainly by the public sector. On the other hand, under present conditions, investment in organised industries will mainly be forthcoming from the private sector, with suitable assistance by the public sector.

12. It may be mentioned here that in addition to the expenditure mentioned in Appendix II—Table "B" by the Central Government and by the States Governments, there will be some expenditure by local bodies, such as municipalities and port trusts. These have not been incorporated in the Plan as outlined here partly because the resources of the local bodies have not been taken account of in the calculation of available finances and partly because the cost of some of these schemes will be assisted out of grants from the States, in whose plans they are presumed to have been included. It would appear that the more essential of the plans of such public bodies would involve an outlay of about Rs. 670 million, the bulk of which would be devoted to "Ports and Harbours" and "Health".

13. The expenditure on multi-purpose projects aggregates, as mentioned above, to Rs. 3,341 million *i.e.*, about Rs. 557 million per annum. About Rs. 1,690 million of this, that is, 51 per cent., is expenditure in respect of the three major projects already commenced, *viz.* Bhakra-Nangal, Damodar and Hirakud. The total number of projects already under construction is 119 and it is proposed to undertake nine more projects during the period. Of the 119 projects on which work has commenced, 113 will be completed within the period of the Plan. Also four out of the nine new projects to be undertaken will reach completion within this period. The expenditure on the uncompleted schemes after 1956-57 is expected to be of the order of Rs. 400 million per year for a period of six years or so.

14. An idea of the nature of benefits expected from these projects during the period 1951-52 to 1959-60 can be had from the following table :—

Year	*Additional Area irrigated (Million acres)*	*Additional Power (1,000 K.W.)*
1951-52	0·65	..
1952-53	1·11	351
1953-54	2·00	554
1954-55	4·32	596
1955-56	5·50	636
1956-57	6·69	708
1957-58	7·50	791
1958-59	8·53	817
1959-60	9·19	910

Briefly, by 1959-60, over nine million acres of land would have been brought under irrigation so as to produce an addition of three million tons of foodgrains. Also 910 thousand K. Ws. of power would have been installed. When all the schemes are completed the addition to irrigated area is estimated to approximate 15 million acres and the addition to installed electrical capacity would be around 2,000,000 K. Ws.

15. Apart from the multi-purpose projects considered above, there are schemes for agricultural improvement estimated to cost Rs. 2,739 million. The object of these schemes is to increase the total area under cultivation of major crops by about 4½ million acres. *The total area thus acquired would mainly be devoted to the production of food grains, jute, cotton and oil seeds.* More important than the extension of cultivation through land reclamation and reduction of current fallows is the improvement in agricultural practices and techniques through utilisation of better seed and manures and the provision of water through minor irrigation works. *As a result of this campaign and of the multi-purpose projects, it is expected that by the end of 1956-57 there will be an addition to agricultural production of 3,000,000 tons of foodgrains, about 155,000 tons of cotton, 375,000 tons of jute and 1,500,000 tons of oil-seeds.* While these estimates are somewhat tentative, the plan of integrated production in the agricultural sector envisages substantial increases in domestic supplies of food and raw materials in the course of the next two or three years, so as to reduce the strain on foreign exchange resources.

16. Although the xpenditure of Rs. 4,800 million on railways appears at first large, this provides for schemes of development involving an outlay ot Rs. 1,750 million only. The rest of the amount is to be spent on some minor projects and on replacements of tracks, equipment, etc. Of the amount ot Rs. 4,800 million, the Railway Depreciation Fund provides annually Rs. 200 million, *i.e.*, Rs. 1,200 million over the six-year period, so that the net expenditure on railways for the six years works out at Rs. 3,600 million.

17. In the Plan as it is now formulated, top priority has been given to schemes for increasing the production of food and essential raw materials. An almost equal priority attaches to schemes for maintaining transport at a level of reasonable efficiency. In the industrial sector, the emphasis has been on fuller utilisation of installed capacity and the making good of certain crucial lacuna in the industrial structure. The annual rate of outlay on the Plan has been estimated on a realistic basis and provides for only a reasonable increase over the annual investment in the public sector during the last two or three years commensurate with needs.

18. The Plan as envisaged here does not provide any detailed estimates in regard to investment in the private sector for the reason that investment in this sector, as far as could now be anticipated, seems to be more or less self-balancing. The task of preparing any reasonably accurate information on this is rendered difficult by the absence of detailed information on National Income, and in these circumstances it is only possible to prepare some indirect estimates of a very rough and ready character. On the basis of such estimates the inference given above has been derived. The method of estimation is briefly described in the note at Appendix VI.

19. For a Plan of this kind which envisages basic development such as under irrigation, multi-purpose projects and transport, it is difficult to assess with any degree of accuracy the quantitative effects of the development plan on the long-term balance of payments and foreign trade problems of the South-East Asian countries though its effect on agricultural production will, beyond doubt, be very beneficial. Out of the total investment about one-third is for agricultural development. This is likely to bring about (*a*) a reduction in India's dependence on other countries for food and (*b*) an increase in the supply of industrial raw materials such as cotton, jute and oilseeds. Plans for industrial development such as the modernisation of Tata's steel plant, increase in the capacity of the Steel Corporation of Bengal and the Bhadravati Iron and Steel Works and the setting up of a fresh plant with a capacity of 500,000 tons of steel per annum, the projected penicillin factory, a machine tools factory and one for radio equipment, etc., will assist private industry to increase its exports to the neighbouring countries.

In 1949 India despatched approximately 20 per cent. of her total exports to the South-East Asian region and obtained from it 7 per cent. of its

imports. In terms of value the exports to this region amounted to about Rs. 1,150 million and the value of the imports was about Rs. 600 million. Important amongst the commodities exported were cotton and jute manufactures, coal, iron and steel, tobacco, other manufactured articles such as soap, vegetable oils, vanaspati , etc., and certain articles in the spices group. The imports mostly consisted of rice, timber, coconuts rubber and non-ferrous metals.

At present a certain amount of capacity in the textile industry in India is lying idle owing to shortages of raw materials. On the other hand, there is evidence of a considerable degree of unsatisfied demand for products like jute and cotton manufactures in the South-East Asian region. The demand for such basic commodities as coal, iron and steel, etc., is equally pressing. Although some degree of industrialisation is bound to be an integral part of the developmental plans of those countries it is unlikely that it will lead to such an increase as to supplant imports from India altogether. On the other hand the increase in the general standard of living which may be expected to result will raise demand for them. Thus there should be no great difficulty in finding markets for the increased exportable surplus brought about by overcoming shortages of raw materials, utilising existing industrial capacity and increasing the production of manufactured articles. What applies to India's exports *vis-a-vis* the other countries in the South-East Asian region is apt to be true of India's imports also. The South-East Asian region as a whole will experience a substantial increase in the quantum of the intra-regional trade.

CHAPTER III

FINANCING THE PLAN

20. The financial arrangements contemplated for the public sector of the Plan described in the previous chapter may now be considered in terms of internal and external finance over a period of six years for which the projects have been prepared. Briefly, the cost analysis of the plan of development as outlined in the earlier chapter and in the statistical statement at Appendix II is as follows: The cost of the plans of development which are ready for execution, as reported by the Central Ministries, States and the more important local bodies, is of the order of Rs. 31,650 million for the six-year period. Against this the financial resources which could be mobilised by the State for investment over this period of years, as estimated by the Reserve Bank and the Ministry of Finance and explained in some detail in a subsequent paragraph are only Rs. 10,310 million for this period, yielding an average of Rs. 1,720 million per annum. It is therefore impossible obviously to comprehend within the limit of these resources all the plans reported by the Government Departments and the States. On the other hand, a more modest and consistent plan of development has been worked out by the Planning Commission and this is estimated to cost over the period of six years Rs. 18,400 million, yielding an approximate average of Rs. 3,070 million per annum for net investment. This leaves a " gap " of the order of about Rs. 8,090 million between resources likely to be available for development and the resources required for a consistent and economical plan of development during the six-year period. Of this amount, Rs. 3,170 million (assumed to be Rs. 3,000 million approximately in subsequent paragraphs of this chapter) is estimated to be the deficit in external finance. Of the Rs. 3,170 million deficit in external finance Rs. 920 million is estimated to be the deficit in hard currencies and the rest in soft currencies.

21. To meet the requirements of Rs. 18,400 million mentioned in the previous paragraph the estimate made of the internal resources which could be mobilised over the period of six years for the purposes of public invest-

ment has been arrived at as follows. A measure of assistance from abroad has been assumed and consequently an enlargement in the structure of incomes in the country, as well as its taxable capacity. This mobilisation is to be achieved through (*a*) additional taxation, (*b*) reduction in expenditure, and (*c*) through public borrowing.

As regards additional measures of taxation, although the level of taxation in certain lines (*e.g.*, the tax on personal incomes) in India is considered to be heavy, there are a few avenues through which additional tax revenues could be raised and estimates indicate that, from this source, a total of Rs. 3,810 million may be expected. On the side of the expenditure, that on defence could be considered for some reduction which would release funds for investment in the public sector. In respect of civil expenditure the scope for reduction is not very large, although a certain amount of reduction is calculated as possible. It is also envisaged that, in a period of about two years, the present expenditure on food subsidies, refugees rehabilitation and pre-partition payments will disappear and thus bring about a reduction in expenditure. Taking into account the magnitude of pre-war net borrowings by the Government, the national savings flow, the net redemption of permanent debt that has been taking place since 1948 and assuming again a gradual improvement in incomes over the next six years, net borrowings of the Government in loans, small savings and treasury bills have been estimated to average up to about Rs. 400 million per annum. Taking all these into account, it has been estimated that the resources, as detailed below, will be available for the Central Government and the States taken together for public investment yielding a total of Rs. 10,310 million over the six years or at an average rate of Rs. 1,720 million per annum.

Estimate of probable resources available for Development in the public sector in the six years, 1951-57

	(Rs. million)
Additional taxation	3,810
Reductions in Expenditure	1,100
Increase in Earnings of Commercial Enterprises (Mainly Railways)	1,800
Net Borrowings from the Public	2,400
Railway Depreciation Fund	1,200
	10,310

22. Thus the estimate of available internal resources for the six-year period is Rs. 10,310 million, or an average of Rs. 1,720 million a year. In the initial years, the available resources are likely to be somewhat less than this average figure and a gradual improvement in the availability of resources for public investment is expected to arise as a result of (*a*) restoration of confidence in the capital markets and (*b*) public investment expenditure undertaken from year to year, as outlined in the Plan. In the later years, therefore, internal resources will be higher than the average postulated in these estimates. The total resources available for the six-year period of Rs. 10,310 million may be forthcoming in the following manner :—

(Rupees in millions)

1951-52	1952-53	1953-54	1954-55	1955-56	1956-57
1,300	1,420	1,580	1,780	2,000	2,230

23. As public investment over the six-year period may be more or less uniform, correspondingly foreign assistance, if available, will have to be larger in the initial years, progressively declining as internal resources improve. This is illustrated in the table below :—

(Rupees in millions)

	1951-52	1952-53	1953-54	1954-55	1955-56	1956-57
Public investment	3,070	3,070	3,070	3,070	3,070	3,070
Internal resources	1,300	1,420	1,580	1,780	2,000	2,230
Deficiency for which assistance is required	1,770	1,650	1,490	1,290	1,070	840

24. The question may be asked at this stage as to whether internal resources will match the rate of public investment at the end of the six-year period. It may be admitted at once that the "product effects" that is the direct utilities produced by public investment, will not be spectacular in this first phase of planned effort as most of this investment is of a basic character and it is only in the next phase that supplies of consumption goods and services will noticeably improve in consequence of this investment activity. However, "process effects" on employment and income will be immediate and noticeable, particularly in view of the size of public investment envisaged at Rs. 3,070 million a year. As incomes are augmented in consequence of public investment and an extra flow of goods as contemplated in Appendix III. Table C, roughly equal in value to the external capital in-flow as projected in the earlier paragraph, takes place savings will grow. Although at present the rate of saving in India is low and the propensity to consume is also prominent, it may be assumed that real incomes will increase and the rate of savings will rise. By the end of the six-year period, therefore, internal savings available for public investment may be of the order of Rs. 2,500 million. At the same time, a somewhat lower rate of public investment at the end of this period is also envisaged since the second phase of planned development would relate less to multi-purpose river valley projects, railways and other basic types of investment and more to investment in sectors of a secondary nature, in respect of which the need as also the scope for public investment *vis-a-vis* private enterprise would be limited. Thus, at the end of the six-year period, with a reduced level of public investment and with larger resources available for the purpose, internal resources are expected to match the demand. Even if some external aid were required, it would definitely be on a considerably smaller scale than seems necessary in the next few years.

25. It is assumed in the proposals described above that the measure of foreign assistance necessary to ensure the success of this development programme is of the order of Rs. 8,000 million, covering the deficit of internal and external finance. The maximum resources which could be raised within the country fall short of the required resources by that amount and the proposals outlined above for mobilising internal resources exhaust the possible sources of finance. Any plan of assistance from abroad, therefore, would have to provide not only external finance to cover the expected deficit in balance of payments (arrived at after taking into account estimated export earnings and the probable sterling releases) caused by import of plant and machinery for the development projects but also external finance for the importation of commodities and services, through the sale of which the public authorities would be able to raise internal finance to cover the budgetary deficit caused by increased development expenditure. The importation of these commodities therefore will assist the economy in two ways—first, it provides for the carrying out of the development programme, and secondly, it counters the inflationary pressure of development expenditure.

26. At this stage the external finance position of India during the last year and the present may be reviewed briefly to provide a background.

During the first half of 1949, the balance of payments of India showed a large deficit resulting from a liberalisation of import controls and a fall in export earning. This position was partially remedied during the third quarter by the tightening of import restrictions and, after devaluation, during the last quarter there was a surplus in India's favour. For the year as a whole, the deficit which was as large as £110 million (excluding extraordinary payments for stores) was financed mainly by drawings on the sterling reserves and to small extent by drawings on the International Monetary Fund and the International Bank. The imports as well as exports during the year showed varying trends in different parts of the year and the totals cannot, therefore, be representative, for comparison with subsequent periods. Also, though part of the improvement in the external accounts position is due to increased export receipts, it also owed a good deal to the restrictions on the imports of many needed commodities, particularly from the dollar

area, licensing of imports from which was completely suspended for about three months. On the export side, the two major items of export were affected not only by domestic factors but also as a result of the difficulties in trade with Pakistan.

27. As regards the forecast for 1950-51, receipts from exports to all areas are placed at £371 million, showing a rise of £56 million over the 1949 level. The dollar share of exports during the year is placed at £94 million as compared to £74 million for 1949. The maximum contribution for this increase in exports to dollar and other areas is expected to come from an increase in the export of jute manufactures which were handicapped during 1949 by raw material shortages. Our gross earnings from invisibles are calculated to remain at £112 million with its dollar part being about £9 million. Total payments including invisibles are placed at £587 million. Out of this, expenditure in the dollar area during the year would be of the order of £132 million. Keeping in mind the decisions of the conference of Commonwealth Finance Ministers held in July, 1949, the level of imports is assumed at 75 per cent. of the 1948 level, plus £4·6 million of the unutilised portion of I.B.R.D. loans. The total imports from this area are estimated at £120 million. Even this, however, would yield a higher level of imports than in 1949. While no great relaxation in imports is expected in relation to this area, a substantial increase is likely in imports of industrial raw materials, mainly raw cotton, chemicals, coal tar dyes, etc., the domestic stocks of which have been drawn down heavily during the past year. Moreover, as the strict licensing systems of late 1949 wear out, and as the new import policies which have been taking shape in 1950 come into operation, imports of certain essential consumer goods are also expected to reach a higher level than in 1949.

28. As regards imports from other areas, the needs of industrial restocking as well as the need for building up inventories in regard to many consumer goods depleted by the tight import controls, will justify a liberalisation of imports to a considerable extent. Important changes have already taken place in the import policy framed recently with reference to these areas, but the commodities which will benefit most will be industrial raw materials and essential consumer goods. However, as an offset to an increase in imports of these commodities, a reduction in expenditure on food-grains has been assumed.

29. The estimate yields a deficit of £105 million for 1950-51, made up of £59 million for dollar area and £46 million for other areas. The finance for imports from the dollar area will come partly from the Central Reserve and partly from drawings on I.B.R.D. loans. The allocation of the deficit between the two sectors is necessarily tentative.

30. The data given for 1951-52 and 1952-53 are less in the nature of forecasts and more in the nature of plans based on assumptions of external assistance related to the finance required for the plan of development as explained earlier. The assumption has been made that the availability of several needed commodities would improve and that the Indo-Pakistan trade would return to normal. Assuming also that no recession is likely during this period in world business conditions (particularly in the U.S.A.), it is expected that exports would be maintained at their present level and allowance has been made for increased competition in lines where it is likely to emerge. As regards the planning of payments, the estimates of the purchase of food and feeding materials have been increased somewhat. The needs in respect of industrial raw materials have been set, taking into consideration (*a*) the export programme and (*b*) the estimated requirements of developmental commodities which are based, in most cases, on data compiled by the Planning Commission on the basis of the projects of the Central and States Governments. An effort has also been made to give relief in respect of certain categories of consumer goods where supply has been tight in the past. The budget for the two years which has been drawn up on these assumptions shows a deficit of £163 million for 1951-52 and £154 million for 1952-53 which

are broadly related to the amounts of external assistance indicated as necessary in the previous paragraphs and the drawings that could be made on our own foreign exchange reserves.

31. The financing of a deficit of the order of £105 million in 1950-51 is practicable this year out of the current sterling resources available to India. The problem of financing the large deficits contemplated in the following two years, would, however, be impossible. If assistance is not forthcoming, it will not only not be possible to obtain the extra quantities of food, industrial raw materials and essential consumer goods necessary to relieve the inflationary pressures, but it will also compel the abandonment of even the limited development programme now in hand. It has been roughly estimated that the payments deficit of the country in the sixth year of the Plan will be as follows:—

(£million)

	51-52	52-53	53-54	54-55	55-56	56-57
Deficit	163·0	154·0	142·0	127·0	110·0	93·0

While the programme itself outlines a declining deficit, it being reduced from £163 million in 1951-52 to £93·0 million in 1956-57, the shortfall between the available finance and the estimated deficit clearly points to the need for assistance, in the absence of which developmental requirements will have to remain unsatisfied.

32. In considering the manner in which any assistance received could be utilised to the maximum advantages of the country, it must be emphasised that aid should not be confined to the import of developmental commodities. Over the six-year period, the excess of developmental financial requirements over available resource is broadly of the order of Rs. 8,090 million of which a little over Rs. 3,000 million represent actual import requirements of the projects. If Rs. 8,090 million is obtained as assistance, a little less than Rs. 5,000 million would be used for the import of other goods which could be domestically sold to raise the internal finance necessary for the schemes. Imports of commodities like wheat, sugar, cotton, etc., at the levels contemplated in Appendix III (Table "C") for the two years 1951-53 are of such magnitude as would enable internal finance to be raised by the sale of these commodities, if they were made available as part of an assistance programme.

33. The planned imports of consumer goods, envisaged for 1951-52 and 1952-53 over and above the normal imports on the existing levels are of the order of £93 million and £85 million respectively. These additional imports have been kept at a high level in these two years, but are likely to go down as the aid period passes ; and this reduction is in tune with the general assumption that, over the period of the aid, the excess of financial requirements over available resources gradually declines.

CHAPTER IV

ADMINISTRATIVE MACHINERY FOR PLANNING

34. Planning in India envisages the co-existence of a private sector and a public sector. In the public sector the responsibility for formulating plans and executing them is shared by the Central and the State Governments. According to the Constitution of the Union of India, some subjects fall wholly within the jurisdiction of the Central Government, some within the jurisdiction of the State Governments and some are the joint responsibility of the two. Amongst the development subjects those which fall in the Central sector are Railways, Post & Telegraph, Broadcasting, National Highways, Port Development, Civil Aviation, Shipping and Navigation, Industry, Rehabilitation, Defence, Inter-State Trade and Commerce, Foreign Trade and

Banking & Insurance. Those which are the responsibility of the State Governments are Agriculture, Education, Medical and Public Health, Co-operation, Irrigation, Electricity, Road Transport, Fisheries, Mines and Mineral Development, Trade and Commerce within the State and certain specified industries. It will be seen from the above list that a large number of development subjects fall within the State sector. However, in view of the limited resources of the States Governments and the need to co-ordinate the development plans of the States Governments so as to evolve an integrated plan for the country as a whole, the Central Government has to have machinery to assist the State Governments in their planning activity both in matters of policy and execution. Besides this, the Centre has also to bear responsibility for several multi-purpose projects and for the exploitation of mineral resources.

35. The administrative set up designed for undertaking the function of planning in the Central Government has to scrutinise the development plans of State Governments and to regulate planning in the private sector besides evolving and executing development plans in that segment of the public sector which is wholly under Central jurisdiction. Each of the Ministries concerned with the Central subjects sponsors schemes for approval by the Planning Commision and by the Ministry of Finance. In the preparation of these schemes, each Ministry is assisted by technical advisers or Standing Committees. After the schemes are formulated the Ministries refer them to the Planning Commission for its recommendation and for indicating the order of priority. The Planning Commission selects schemes which fit into an overall Plan and decides the order of priority in respect of such schemes. They are then referred to the Ministry of Finance for financial approval. Normally the Ministry of Finance is empowered to approve minor schemes of developments. In the case of the more important schemes, the Ministry of Finance has to seek the approval of the Economic Committee of the Cabinet or in certain cases of the Cabinet itself. Further, in respect of schemes involving a non-recurring expenditure of more than Rs. 500,000 or a recurring of more than Rs. 100,000 the approval of a Parliamentary Committee known as the Standing Finance Committee has to be obtained. Thus, schemes recommended by the Ministries at the Centre or by the State Governments are scrutinised carefully from the point of view of their suitability for inclusion in the all-India Plan and from the point of view of financial commitments.

The function of the Planning Commission is broadly :

(*a*) to assess the available resources and to investigate the possibilities of augmenting such of those resources as are found to be deficient in relation to requirements ;

(*b*) to formulate a Plan for the most effective utilisation of the resources ;

(*c*) to define the stages in which the Plan should be carried out and to determine the priorities in respect of schemes of development ;

(*d*) to appraise from time to time the progress achieved in the execution of each stage of the Plan and to make recommendations regarding adaptation necessary at each stage ; and

(*e*) to determine the nature of the machinery for securing the successful implementation at each stage of the Plan in all its aspects.

At present, the organisation of the Planning Commission consists of two Secretariat Branches, one in charge of routine administrative matters and the other in charge of co-ordination, and six technical Divisions, one each for Resources ; Economic Survey and Finance ; Food & Agriculture; Industry ; Trade & Communications ; Natural Resources ; and Employment and Social Services. These Divisions are headed by experts in the respective fields who assist the Members of the Planning Commission in taking decisions regarding the feasibility and desirability of schemes submitted by the Ministries

at the Centre and by the State Governments. The final recommendations are made by the Commission, the Chairman of which is the Prime Minister, for approval by the Cabinet.

Coming to the executive agencies under the Central Government, most of them form part of the normal administrative machinery of the several Ministries and are employed at the same time on normal administrative work as well as on development schemes. There are, however, a few agencies set up by the Government, such as the Central Tractor Organisation and the Damodar Valley Corporation, concerned only with development work. Executive responsibility is sometimes shared by the Central Government and private enterprises as in the case of the Hindustan Aircraft Factory, Shipping and Civil Aviation. A number of important development schemes are being executed on behalf of the Government by foreign engineering firms as in the case of the Sindri Fertilisers Project and the Locomotive Manufacturing Project at Chittaranjan.

36. The Planning machinery in the States is as follows. Most of the States have a separate Planning and Co-ordination Department or Board usually under the Chief Minister of the State which is responsible for co-ordination of schemes recommended by the several departments. In some of the larger States like the Uttar Pradesh, this function is done by a High Power Committee of the Cabinet. In a fairly large number of States there exists besides the Planning and Co-ordination Department, a network of planning agencies at the regional level like the District and Rural Reconstruction Board or District Development Association. Usually these agencies function under District Development Officers and Commissioners but non-officials are also associated with such agencies in certain cases. In some States like the Uttar Pradesh and Madras, a scheme for devolving some responsibility for development of industrial co-operatives, communications, water supply irrigation and medical facilities in villages to "gram panchayats" has been envisaged. To co-ordinate the work of these primary units, for each group of 55 units, there will be a Development Officer and a Development Committee, responsible in their turn to the District Development Board or Committee. Thus, plans for development affecting the several subjects under the States' jurisdiction are evolved at different levels and submitted to the Planning and Co-ordination Department for deciding priorities. Schemes which require technical or financial aid from the Centre have, however, to be submitted by the Planning and Co-ordination Departments to the Centre for scrutiny and approval.

So far as execution of plans is concerned, various departments of the States Government are largely responsible. The more important of these from the execution point of view are the State Public Works Department, the Hydro-electric and Canal Department, the Education Department, the Agriculture Department, Industries Department and the Medical & Public Health Department. As stated earlier, the Central Government executive agencies often provide specialised technical assistance to these departments. In certain cases executive agencies of the Central Government take the entire responsibility for schemes formulated by the State Governments and approved by the Central Government.

37. The above machinery for formulating plans and executing them is concerned mainly with the public sector. But a considerable part of industrial development falls within the private sector, in respect of which the Government requires machinery for deciding production targets and for operating a system of checks and incentives so as to ensure expansion along desired lines. In the matter of deciding production targets, the Government is advised by Standing Committees or Panels or Technical Advisers. At the Centre, the Planning Commission is responsible for examining the feasibility of the expansion targets suggested, and for suggesting ways and means of regulating activity in the private sector in such a way as to achieve a pattern of expansion which conforms to the objectives of the overall Plan. Machinery exists for administration of controls, such as Capital Issues Control and Control of

Imports and Exports, which are utilised for preventing excess investment in any direction. To stimulate investment along certain lines, assistance such as tax reduction and subsidies are given. The Government has also set up corporations like the Industrial Finance Corporation (in wh ch along with the Government, institutional and private investors participate) with a view to aiding private investment.

In respect of the private sector, Government machinery is designed to decide the broad lines of development. Formulation and execution of individual schemes is left largely to private enterprise. Wherever the Government participates jointly in projects in the private sector, its representatives function on the Boards of Management, so that to a larger or smaller extent the Government participates in the execution of development plans in the private sector also.

CHAPTER V

TECHNICAL RESOURCES

38. The country's resources in technical manpower are indicated below broadly under the following four heads :—

(*a*) Engineering and Technological.

(*b*) Scientific Education and Research.

(*c*) Agricultural Education and Research.

(*d*) Medical Education and Research.

As regards administrators, it is not possible accurately to set out the number involved. But as the result of the transfer of power and the Partition, the number of trained administrators over a wide field was seriously reduced. The Government of India have introduced emergency measures for filling the gaps and at the same time, have started systematically planning on a long-term basis to make provision for the future recruitment to the Civil, Police and Technical Services.

39. *Engineering and Technological* : Facilities for post-graduate research in engineering and technology exist only to a limited extent. There are five institutes that impart education in Technology. One institute provides post-graduate courses in aeronautical engineering ; metallurgy ; internal combustion engineering ; power engineering ; and chemical technology ; one each in ceramics, glass, sugar technology, pharmaceutics, and oil technology, and two in applied physics.

There are over 23 first-grade engineering colleges offering courses in civil, electrical and mechanical engineering. Recently, commercial engineering courses have been organised in four of these ; electrical communications in two ; metallurgical engineering in one and highway engineering in one. There are also eight first-grade institutions teaching technological subjects up to degree standards, of which three institutions offer courses in chemical technology ; two in oil technology ; one each in ceramics, glass pharmaceutics, metallurgy and leather ; two in mining and three in textile technology.

The average outturn per year of trained personnel from these institutions is as follows :—

Engineering	2,972
Technology	792

Scientific Education and Research

40. *Basic Scientific Education* : There are a large number of institutions which provide for the basic Scientific Education up to B.Sc. (Hons) standard in Physics, Chemistry, Mathematics, Botany, Zoology, and Geology. The normal annual outturn is :—

Intermediate in Science	19,660
B. Sc. Graduates	4,790
B. Sc. (Hons) Graduates	1,100

Higher Scientific Education : Higher Scientific Education and Research go together and in India the combination of teaching and research work is one of the distinguishing features of the Universities which are primarily responsible for Higher Scientific Education. There are 25 Universities in some of which the M.Sc. degree is obtainable mainly by research and in others either by research or by examination or both. Most of the Universities maintain departments for post-graduate education in research in various branches of the basic sciences—Physics, Chemistry, Mathematics, Botany, Zoology, Geology, etc.

Research work carried out at the Universities represents but one aspect of research development. For a complete picture of scientific and industrial research a reference has also to be made to the activities of specialised institutions. Unlike the Universities these do not ordinarily cater for the routine post-graduate teaching of scholars for higher degrees or diplomas, but are whole-time research establishments. The Chief Centres of scientific and industrial research of this type are :—

The Indian Institute of Science.

Bose Research Institute.

The Indian Association for the Cultivation of Science.

The Tata Institute of Fundamental Research.

A series of National Laboratories which are in the course of completion.

These five institutes cover a very wide range of research workp—hysics ; general and inorganic chemistry ; organic chemistry ; physical chemistry ; bio-chemistry aeronautics ; co mmunicaton engineering ; advanced statistics with special reference to the study of cosmic radiation ; quantum mechanics and theory of elementary particles ; plant physiology and breeding ; crystallo graphy and minerology.

In additon to these, there are a number of other research institutions meant specially for specific branches of science and technology, such as solar physics, jute, lac, fisheries, etc. These are eight in number and are :—

The Solar Physics Laboratory.

The Central Marine Fisheries Research Institute.

The Lac Research Institute.

The Jute Technological Laboratory.

The Cotton Technological Laboratory.

The Institute of Paleo-botanical Research.

The Forest Research Institute.

The Nutrition Research Laboratory.

The annual outturn is of the order of 675 for the higher education and research (M. Sc. and Ph. D. in Science) and 220 in the other research institutes.

41. *Agricultural Education and Research* : There are about 18 institutions in the country which provide facilities for educatoin and training in agriculture, dairy farming, forestry, veterinary sceinces, fisheries, and other allied subjects. The Chief centres are :—

The Indian Agricultural Research Institute, Delhi.
The Agricultural Research Institute, Coimbatore.
The Sugarcane Research Station, Coimbatore.
The Indian Veterinary Research Institute, Izatnagar.
The Forest Research Institute, Dehra Dun.
The Indian Dairy Research Institute, Bangalore.
The Central Tobacco Research Institute, Guntur.
The Central Rice Research Institute, Cuttack.

The Agriculture Research Institutes, Delhi and Coimbatore, carry out research in all branches of agriculture and allied sciences, comprising mycology, agricultural chemistry, entomology, food crops, paddy, cotton, agronomy, etc. The Dairy Research Institute carries out research in all aspects of dairy sciences including animal nutrition, dairy technology, chemistry, bacteriology and engineering. The other institutes are all meant for specialised research in their respective branches of agricultural science.

The annual outturn of technical personnel from these institutes is :—

Agriculture, Dairying, etc.	180
Degrees in Agriculture and Agriculture Engineering	730
Research workers	190

42. *Medical Education and Research* : There are some 30 medical colleges in India of which 15 are well-established institutions. The established colleges have been turning out in recent years an average of 860 graduates each year against an intake of some 1,150 students. There are at present about 52,000 qualified Doctors. There are, in addition, about 20 medical schools with an annual outturn of about 800 licentiates.

Medical research is conducted in the medical colleges, only to a limited extent. There are, however, a number of specialised research institutions dealing with particular branches of medical science. These are :—

The School of Tropical Medicine, Calcutta.
The Haffkine Institute, Bombay.
The Institute of Preventive Medicine, Guindy.
The Central Research Institute, Kasauli.
The All-India Institute of Hygiene and Public Health, Calcutta.
The Malaria Institute, Delhi.
The Pasteur Institute, Coonoor.
The Drugs and Pathological Laboratories.

As regards qualified and practising nurses, the number is estimated at about 7,000. In addition there are large numbers of local nurses also, who have no speciaised training, but nevertheless gained by experience a considerable degree of practical skill.

43. As regards foremen and other supervisory personnel, India is trying to increase the number as rapidly as possible mainly by two methods. First, a considerable number of students, is sent abroad each year, under a scheme of Government scholarships, for training in a variety of technical subjects. One of the terms of their contract is that they will serve Government for a stated period on the completion of their courses. The second method is by entering into agreements with foreign firms under which the training of Indian

personnel in all stages of the enterprise is provided for. Exampls of this are the contracts with the British Locomotive Manufacturers Association for the manufacture of Locomotives at Chittaranjan ; and the technical aid agreement with a Swiss firm for the manufacture of Railway Coaches. Others are :—

(i) A contract with the Automatic Telephone & Electric Co. of the U.K. for technical assistance for the establishment of a fully equipped factory to manufacture telephone equipment in India.

(ii) An agreement with Oerlikons of Switzerland for a prototype machine tool factory.

(iii) A further contract with same firm for setting up a machine tool factory.

(iv) A contract with a Swedish firm for the setting up of a factory for the manufacture of penicillin and sulpha drugs.

(v) An agreement with De Havilland Aircraft Co. for technical assistance for the manufacture of DH 100 and DH 112 type of aeroplanes.

(vi) An agreement with Lindsay Parkinson for the extraction of coal by mechanical means.

In addition, there are a number of automobile assembly plants where large numbers of supervisory skilled and semi-skilled personnel are being trained. These are Hindustan Motors, Asok Motors, Premier Automobile, Standard Motors and the Rootes Group. There is also the Hindustan Aircraft factory at Bangalore, where prototypes are being assembled.

The main pilot plant project undertaken in India is the Sindri Fertiliser Factory in Bihar. This is likely to come into operation in 1951-52. It will utilise the gypsum process and produce some 1,000 tons of ammonium sulphate per day. Ammonia will be synthesised from atmospheric nitrogen and Calcium Carbonate, the by-products will be utilised for the manufacture of cement. This is a basic heavy chemical industry and the unit is State owned.

44. As indicated, India will require technical assistance from outside for the implementation of the six year development programme. The total number of persons required to be trained for the various projects is of the order of 3,000 and the experts required would be of the order of 500. Tables giving the detailed needs, the timings and numbers and the types have been indicated in Appendix V (Table " E "). Briefly the requirements of technical aid under the four broad categories mentioned in paragraph 38 above are—

	Persons to be trained	*Experts required*
Engineering and Technological Experts	967	463
Scientific Education and Research	857	19
Agricultural Education and Research	20	20
Medical Education and Research	1,301	54
TOTAL	3,145	556

CHAPTER VI.

WHAT INDIA HAS DONE AND CAN DO

45. As has been indicated earlier, the existing resources available to India in the financial, material and human fields are not sufficient to carry out the modest programme of development described in Chapter II. It has also been indicated that if external financial assistance equal to Rs. 8,090 million is forth-coming, it would be possible for the six-year programme of development to proceed. Any approach, therefore, to the question of what assistance India can afford to give to other countries of the Area either to meet their own balance of payments deficits or to provide finance for their own internal expenditure, must necessarily be linked with the amount of assistance which India itself can obtain. In the later paragraphs of this Chapter, the amount of financial assistance which India has already afforded to other countries of the Area has been indicated. This is already throwing a serious burden on the economy of the country. This does not mean, however, that India is not prepared to make some sacrifice in order to meet the needs of other countries of the Area. It may well be expected that, if, with external financial assistance the development programme can go forward, the completion of projects within the programme will itself lead to a greater development of the Indian economy, and in its turn, to greater production. Out of this extra production India will endeavour to assist other countries. The problem appears to be not so much as to whether direct financial assistance can be given but rather whether India, peculiarly situated as she is to produce a large variety of consumer goods and light capital equipment, can, with the help of external aid received by her, so increase her production that there will be a surplus which could be made available to other countries. It would then be a question of negotiating specific credit arrangements, either inter-governmental or through private trading chanels, if other countries of the Area did not have sufficient funds to finance such purchases. Thus, if India could be assured of adequate supplies of raw cotton, undoubtedly the volume of exports of textiles could be increased. Similarly in many ranges of other essential consumer goods, it should be possible for reasonable quantities to be made available to other countries of the Area. It is clear, therefore, that the ability of India to extend financial assistance to other countries of the Area is linked with India herself obtaining certain financial assistance from abroad.

46. Passing to the field of technical assistance, although, as has been indicated earlier, India's own needs cannot be satisfied from her own resources, nevertheless, she will be prepared to extend technical training facilities and to provide a limited number of experts to other countries of the Area. The details of the various types of technical assistance that India can make available are set out in Appendix V (Table E). Broadly, in so far as the training of personnel in India is concerned, capacity could be made available in existing institutions for the training of some 2,600 persons. The courses which could be covered are Degree and Diploma Courses in Engineering and Technology ; Post-Graduate Study and Research for the Master of Science Degree and facilities for the B. A., B. Sc., and M.A. Degrees. In the field of communications, facilities could be made available for practical training in the installation and maintenance of communications equipments ; for Radio Operators and Technicians for Junior Airline Pilots ; for Weather Forecasting and Meteorological observation and in long distance communications by Cable and Radio. As regards Transport' facilities could be provided for practical training in Highway Engineering and, in the Medical and Public Health sectors, courses for Medical and Public Health. In the field of Industry, training facilities could be made available for courses relating to the manufacture of iron and steel ; cotton textiles ; chemicals ; crockeries and electric insulators, as well as in branches of General Engineering. Facilities could also be offered for training Naval Cadets ; for training in the design, construction and maintenance of irrigation systems as well as in Mining, Engineering and Geology. For Agriculture, practical courses would be available in Dairy Development ; in the Indian Forest Research Institute ; in Veterinary Science ; in Fisheries

and in Agricultural Statistics. Practical training would also be available in Civil, Electrical and Mechanical Engineering in Railway Workshops and courses would also be available for training as Inspectors of Mines, Inspectors of Factories and Employment Officers. As regards the provision of experts, it will be appreciated that, owing to India's own great needs, the number of persons who could be sent abroad will necessarily be limited. It does not seem that more than about 30 persons could be made available, although this figure cannot be taken as final until more detailed information is available as to the actual types of experts required. Broadly, experts of the following types might be available :—

Radio Communications.

Junior Pilot Instructors.

The planning of Meteorological operations.

The planning and installations of equipment for international communications.

Problems connected with the design, construction and maintenance of irrigation systems.

In so far as the financial aspects of such assistance are concerned India has already agreed, in connection with the Technical Assistance Bureau at Colombo, that she will pay the normal tuition fees, capitation charges, boarding and messing charges of trainees sent to India and for experts, their travelling allowance to and back from the country of deputation together with their salaries.

47. India's Balance of Payments position has, since 1946, been unfavourable and it is only since devalution in September, 1949, that some improvement has taken place. It cannot be assumed, however, that this improvement is of more than a purely temporary nature, since India's needs in the fields of food, consumer goods and capital equipment are so large that it is unlikely that the total requirements can be financed over the next few years from her own earnings of foreign exchange from exports plus such releases as may be obtained from the sterling balances. In these circumstances, it has not been possible to make available, since the end of the war, any sums to other countries of the Area for meeting their own current balance of payments deficits. Despite this, India has made available to certain countries of the Area, loans which have been of material assistance in helping those countries. The Government of India has participated to the extent of £ 1 million in the Commonwealth loan to the Republic of Burma granted in June, 1950. In September, 1946, a loan of Rs. 50 million was made available to Siam to provide that Government with the means of purchasing goods which the Government of India had for disposal. In 1948, a loan of Rs. 75 thousands was granted to the Republic of Indonesia. In addition to these direct inter-governmental loans, the Government of India has afforded material assistance to Burma, Pakistan and the U. K. The Government of Burma owes the Government of India approximately Rs. 640 million, which represents the latter's share of the net outstanding debt of the Government of India on the date of the separation of the two countries. This debt was repayable in 45 years commencing from 1937-38, with interest at 3½ per cent. Payments have, however, been suspended by the Government of Burma since 1942-43. In addition to this amount, the Government of Burma is to pay to the Government of India each year 7½ per cent. of the total expenditure on central pensions in payment on the date of separation. No payments on this account have been made by Burma since 1942-43 and the amount due is approximately Rs. 40 5 million.

As regards Pakistan, India took over at the time of partition, the whole of the debt of the undivided country and agreed that Pakistan need not begin to repay its share, tentatively estimated at some Rs. 3,000 million, until 1952. In the meanwhile India undertook to service the debt. In so far as the U. K. is concerned India has materially lightened the burden on the economy of that country during the last few years by agreeing to draw on her sterling balances at a slower rate than the needs of her economy demanded. The arrangements

which have been negotiated between the Government of India and the Government of U.K., since 1947, have resulted in the release up to June, 1950, of a total of £294 million to India out of the total amount owed by the U.K. to India of £1,160 million as at August, 1947. India still holds sterling assets of the order of £600 million and is continuing to co-operate with the U.K. and the rest of the sterling area by limiting dollar imports and by a limitation on the total amount of sterling that can be used out of the balances.

48. Since 1946, India has contributed to the United Nations and its Specialised Agencies, including ILO, WHO, UNESCO, FAO and UNICEF, sums of the order of $9,730,289. In addition, a sum of Rs. 1·25 million has been made available under the Expanded Scheme of Technical Assistance. It is not possible to state the amounts from these sums which have been utilised for activities of these organisations in South and South-East Asia. It is felt, however, that the rates of these contributions lay a burden on the country heavier than the economy can withstand. Since the end of the war, the levels of production and of economic activity generally have increased appreciably in the countries of Western Europe, sustained as many of them have been by Marshall Aid, while, in the countries of the South and South East Asia increases in the standards of living and the growth of production have been insignificant. Nor has the assistance received from these bodies been such as effectively to touch even the edge of the many problems facing the country.

49. Passing to the problem of the allocation of scarce commodities, the main fields in which India has been, and will continue to be, of assistance not only to the Commonwealth but also to other countries of the world, lie in the fields of raw jute and jute manufactures, raw cotton and cotton piece goods, tea and mineral products such as manganese ore, mica, etc. Prior to partition, the undivided India had a virtual monopoly in the jute trade and a large share in the world cotton and tea trade. Partition cut off the main sources of supply of raw jute and raw cotton and India has necessarily had to reorientate her policies in regard to the supplies of these essential raw materials. The policy now being followed is to increase the production of these two items so as to produce, within the country, as great a quantity as possible. In the field of cotton textiles, exports during the last 12 months have reached unprecedented heights and this had led to a serious shortage of cloth for internal consumption. Excise duties have been reduced on certain varieties of cotton textiles ; export duties have also been removed and a rebate of import duties on the export of fine and superfine cloth has been granted. The export prices of jute goods have also been controlled and internal consumption cut down. Exports of jute goods to hard currency countries are licensed freely and as large quotas as possible allocated. For soft currency area, quotas have also been fixed on the basis of the established shippers principle and, for cotton textiles, an overall limit of export has been fixed without destinational quotas. As regards tea, under the International Tea Agreement, India's export limit has been fixed at 130 per cent. of the standard figure which, in terms of export, means 452 million lbs. Further, a bulk purchase agreement has been arrived at with the U. K. Government under which the latter is enabled to purchase very large quantities of tea at rates lower than would have obtained in the normal auctions. Exports of manganese have been stepped up very appreciably, rising from 180,000 tons in 1945-46 to 680,000 tons in 1949-50. Of this, no less than 470,000 tons have been sent to U.S.A. The exports of mica, mica splittings and mica scrap and waste have also increased considerably, rising from about 125,000 tons in 1945-46 to 285,000 tons in 1949-50. As has been indicated above, special efforts have been made to increase the production of raw jute and raw cotton in order to meet the difficult supply position. The area under jute acreage has increased from 652,000 acres in 1947 to 1,158,000 acres in 1949 and the yield over the corresponding years from 1,658,000 bales to 3,117,000 bales. Similarly, production of raw cotton is being increased and the acreage has risen from 10½ million acres approximately in 1947-48 to 11½ million acres approximately in 1949-50.

50. India has attempted to utilise to the maximum of her ability the sources and resources available to her through the United Nations and its Specialised and Regional Agencies. Close co-operation has been maintained with the IMF and the International Bank, from the former of which $100 million have been purchased and from the latter of which loans of the order of $63 million have been taken. In addition, a considerable Programme of welfare schemes for Malarial Control, Maternity and Child Health, Venereal Diseases and Cholera, Anti-T.B. Centre and a Nursing College, has been drawn up for financing from WHO resources. Although the assistance available under President Truman's Point Four Programme is not directly of the same nature as that available from existing International Organisations, an approach has been made to the U.S. Government for assistance under this Scheme for the provision of experts in the fields of Tractor Management ; Mycology ; Entomology ; Topographical Survey ; Organisation of the Grading of Wool ; Engineering in the Forestry Research ; Cellulose manufacture ; Plywood utilisation ; Food Packing ; Grading of Hides and Skins ; Artificial Insemination ; Fisheries ; Road Engineering ; Multipurpose River Valley Projects ; Fuel Technology and Concrete Engineering, etc. From UNICEF, assistance has been sought for the development of a Maternity and Child Health Section at the All India Institute of Hygiene and Public Health, as well as training programmes for Poliomyelitis, Tuberculosis and Paediatrics. From ILO experts have been sought for advising Social Security Administration and an approach has been made to the United Nations for Fellowships and Scholarships in Telegraph, Telephone and Radio communication systems. A detailed statement setting out the technical assistance required by India and the approaches already made is attached at Appendix V (Table E).

APPENDIX I

INDEX TO TABLE " A "

1. Statement showing Consumption, Production, *Import and *Export (*Quantity and Value) of Development Commodities.

(1) SEMI-FINISHED AND FINISHED STEEL.

(2) NON-FERROUS METALS :—

- (*i*) Antimony.
- (*ii*) Zinc.
- (*iii*) Lead.
- (*iv*) Aluminium.
- (*v*) Copper.
- (*vi*) Tin.

(3) TIMBER:—

- (*i*) Soft.
- (*ii*) Hard.

(4) CEMENT.

(5) FERTILISER :—

- (*i*) Ammonium sulphate.
- (*ii*) Sodium Nitrate.
- (*iii*) Ammonium Phosphate.

II. Imports (Quantity and Value) of Machinery, Equipment and Vehicles.

(1) AGRICULTURE TRACTORS.
(2) OTHER AGRICULTURE MACHINERY.
(3) EARTH MOVING EQUIPMENT.
(4) LORRIES.
(5) BUSES.
(6) PORT AND HARBOUR EQUIPMENT.
(7) ELECTRICAL APPARATUS.
(8) ELECTRICAL MACHINERY.
(9) MINING MACHINERY.
(10) INDUSTRIAL MACHINERY.
(11) ASSEMBLY COMPONENTS.
(12) SPARE PARTS (MOTOR, TRUCKS AND BUSES).
(13) LOCOMOTIVES.
(14) RAILWAY WAGONS
(15) OTHER RAILWAY EQUIPMENT :—

- (*i*) Electrical Multiple Coaches.
- (*ii*) Coaching Stocks.

III. Statement showing Consumption, Production, *Import and *Export (*Quantity and Value) of Othher Important Commodities.

(1) COAL.
(2) OIL (PETROLEUM PRODUCTS).
(3) JUTE.
(4) COTTON.
(5) TEA, INCLUDING TEA CHESTS.
(6) TOBACCO.
(7) RAYON.
(8) SALT.
(9) PIG IRON.

TABLE 'A'

I. STATEMENTS SHOWING CONSUMPTION, PRODUCTION, IMPORT AND EXPORT (QUANTITY) AND VALUE OF DEVELOPMENT COMMODITIES

(All figures in thousands)

	1949-50	1950-51	1951-52	1952-53	1953-54	1954-55	1955-56	1956-57	1951-57 (Total)	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) Semi-Finished and Finished Steel										
Consumption . . . (Tons)	1,331	1,326	1,326	1,426	1,595	1,696	1,696	1,836	9,596	*
Production . . . (Tons)	1,026	1,026	1,026	1,076	1,146	1,296	1,336	1,486	7,366	
Imports . . . (Tons)	322	350	350	400	500	450	400	400	2,500	
Imports—Value C.I.F. . . (£)	12,000	12,900	12,900	14,800	18,500	18,700	14,800	14,800	92,500	†
Exports . . . (Tons)	17	50	50	50	50	50	50	50	300	
Exports—Value F.O.B. . (£)	510	1,500	1,500	1,500	1,500	1,500	1,500	1,500	9,000	‡
(2) Non-Ferrous Metals										
(i) *Antimony*										
Consumption . . . (Tons)	48	38	6	6	7	7	7	7	80	
Production . . . (Tons)	48	38	6	6	7	7	7	7	80	
Import and Export	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	
(ii) *Zinc*										
Consumption . . . (Tons)	31	40	45	48	50	50	50	50	333	
Production . . . (Tons)	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	
Imports . . . (Tons)	31	40	45	48	50	50	50	50	333	
Imports—Value C.I.F. . . (£)	3,900	5,100	5,700	6,100	6,400	6,400	6,400	6,400	37,400	
Exports	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	
(iii) *Lead*										
Consumption . . . (Tons)	8	10	10	12	12	15	15	18	82	
Production . . . (Tons)	5	5	1	3	5	6	6	6	27	
Imports . . . (Tons)	1	9	9	9	7	9	9	13	55	
Imports—Value C.I.F. . . (£)	700	900	900	900	900	900	900	1,100	5,600	
Exports	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	
(iv) *Aluminium*										
Consumption . . . (Tons)	10	12	12	15	15	18	18	20	98	
Production . . . (Tons)	4	4	4	4	5	6	7	7	33	
Imports . . . (Tons)	6	8	8	11	10	12	11	13	65	
Imports—Value C.I.F. . . (£)	1,100	1,400	1,400	1,700	1,700	2,000	1,800	2,200	10,900	
Exports	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	
(v) *Copper*										These estimates are based on the assumption that a copper refinery will be set up by 1952-53 to produce 10,000 tons of electroyic copper per year.
Consumption . . . (Tons)	36	46	46	50	50	56	60	60	322	
Production . . . (Tons)	6	6	6	16	16	17	17	17	89	
Imports . . . (Tons)	30	40	40	34	34	39	43	43	235	
Imports—Value C.I.F. . . (£)	5,600	7,400	7,400	6,200	6,200	7,100	8,100	8,100	43,100	

(vi) *Tin*											
Consumption	(Tons)	4	4	5	5	6	6	6	6	6	34
Production	(Tons)	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Imports	(Tons)	1	4	5	5	6	6	6	6	6	34
Imports—Value C.I.F.	(£)	600	2,400	2,700	3,000	3,600	3,600	3,600	3,600	3,600	20,100
(3) Timber											
(i) *Soft Wood*											
Consumption	(Tons)	500	500	510	515	515	540	540	561	3,181	
Production	(Tons)	500	500	510	515	515	540	540	567	3,187	
Imports	(Tons)	10	10	10	10	10	10	10	10	60	
Imports—Value C.I.F.	(£)	300	300	263	225	225	187	188	150	1,238	
Exports	(Tons)	10	10	10	10	10	10	10	10	60	
Exports—Value F.O.B.	(£)	225	225	225	225	225	225	225	225	1,350	
(ii) *Hard Wood*											
Consumption	(Tons)	1,400	1,500	1,560	1,590	1,590	1,680	1,680	1,765	9,865	
Production	(Tons)	1,500	1,500	1,540	1,560	1,560	1,640	1,640	1,720	9,660	
Imports	(Tons)	20	20	40	50	50	60	60	70	330	
Imports—Value C.I.F.	(£)	1,500	1,500	2,700	3,188	2,188	3,375	3,150	3,150	17,751	
Exports	(Tons)	40	20	20	20	20	20	20	25	125	
Exports—Value F.O.B.	(£)	1,200	600	600	600	600	600	600	750	3,750	
(4) Cement											
Consumption	(Tons)	2,488	2,690	3,150	3,570	3,700	3 850	3,850	3,850	21,950	Demand about four million tons. Entire availability will be consumed.
Production	(Tons)	2,300	2,600	3,200	3,600	3,750	3,900	3 900	3,900	22,250	
Imports	(Tons)	300	50	Nil	Nil	Nil	Nil	Nil	Nil	Nil	
Imports—Value C.I.F.	(£)	2,250	350	Nil	Nil	Nil	Nil	Nil	Nil	Nil	
Exports	(Tons)	12	60	50	50	50	50	50	50	300	
Exports—Value F.O.B.	(£)	84	434	350	350	350	350	350	350	2,100	
(5) Fertilisers											
(i) *Ammonium Sulphate*											
Consumption	(Tons)	167	500	500	500	510	510	510	520	3,050	
Production	(Tons)	46	50	100	200	420	420	420	420	1,980	
Imports	(Tons)	121	450	400	300	90	90	90	100	1,070	
Imports—Value C.I.F.	(£)	2,686	9,945	8,840	6,630	1,989	1,989	1,988	2 210	23,647	
Exports		Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	
(ii) *Sodium Nitrate* (15·5% Nitrogen)											
Consumption	(Tons)	34	30	25	20	15	10	5	5	80	
Production	(Tons)	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	
Imports	(Tons)	34	30	25	20	15	10	5	5	80	
Imports—Value C.I.F.	(£)	639	564	470	376	249	188	94	94	1,471	
Exports		Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	
(iii) *Ammonium Phosphate* (20% N2 and 20% P 205											
Consumption	(Tons)	57	50	60	75	100	110	120	139	595	
Production	(Tons)	47	50	65	80	110	125	140	140	620	
Imports	(Tons)	20	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	
Imports—Value C.I.F.	(£)	228	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	
Exports		Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	

*Expansion schemes :—(1) Mysore, (2) S.C.O.B. (3) Tata's.

§Import rates are calculated at £7·5 per ton.

†Calculated at the rate of £37 per ton.

‡ Calculated at £20 per ton.

II. Import (Quantity and Value) of Machinery, Equipment and Vehicles

(All figures in thousands)

		1949-50	1950-51	1951-52	1952-53	1953-54	1954-55	1955-56	1956-57	1951-57 (Total)	Remarks
(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Machinery and Equipment and Vehicles											
(1) Agricultural Tractors	Imports (Nos.)	3	8	10	12	12	12	12	12	70	
	Value (£)	3,000	6,000	7,500	9,000	9,000	9,000	9,000	9,000	67,500	
(2) Other Agricultural Machinery.	Imports (Nos.)	..	..								
	Value (£)	..	..	1,870	2,500	2,500	2,500	2,500	2,500	14,370	
(3) Earth Moving Equipment.	Imports (Nos.)	..	..								
	Value (£)	..	..	1,000	1,000	..	..	..	..	2,000	
(4) Lorries . .	Imports (Nos.)	18	11	21	21	21	21	21	21	126	50% replaced @ Rs. 4,000/- each lorry.
	Value (£)	5,800	3,800	7,600	7,600	7,600	7,600	7,600	7,600	45,600	
(5) Buses . . .	Imports (Nos.)	8	5	9	9	9	9	9	9	54	
	Value (£)	2,500	1,600	3,240	3,240	3,240	3,240	3,240	3,240	19,440	
(6) Port and Harbour Equipment.	Imports	..	..								
	Value (£)	..	..	125,255	17,859	16,716	41,670	80,405	80,942	362,857	
(7) Electrical Machinery	Imports										
	Value (£)	11,050	11,920	12,840	14,050	12,800	11,320	10,350	8,340	69,700	
(8) Electrical Apparatus	Imports										
	Value (£)	12,250	11,240	11,320	9,870	9,510	7,490	3,220	3,740	45,250	
(9) Mining Machinery	Imports										
	Value (£)	1,000	1,100	1,100	1,100	1,100	1,100	1,100	1,100	6,600	
(10) Industrial Machinery											
(a) Machine Tools	Imports										
	Value (£)	3,600	3,500	3,400	3,200	3,400	3,000	2,600	2,200	17,800	
(b) Machinery and plant for Railways	Imports										
	Value (£)	..	..	2,600	2,600	2,600	2,600	2,600	2,600	23,330	
(c) Cotton Textile Machinery	Imports										
	Value (£)	5,180	2,000	3,140	4,270	3,380	4,120	4,120	4,300	23,330	
(d) Industrial Machinery (Miscellaneous)	Imports										
	Value (£)	3,400	3,500	3,500	3,500	3,500	3,500	3,500	3,500	21,000	
(11) Assembly Components	Imports										

(12) Spare Parts (Motor Trucks and Buses) .	Imports Value (£)	4,600	6,000	6,000	6,000	6,000	6,000	6,000	6,000	36,000	
(13) Locomotives . .	Imports (Nos.)	..	..	267	230	184	160	150	130	1,121	(Actual Nos.)
	Value (£)	..		9,000	7,800	6,200	5,400	5,100	4,400	37,900	
(14) Railway Wagons .	Import (Nos.)	..	..	7	7	6	6	6	6	38	
	Value (£)	..	..	6,300	6,300	5,400	5,400	5,400	5,100	34,200	
(15) Other Railway Equipment											
(i) Electric Multiple Coaches (in sets) .	Imports (Nos.)	..	..	750	750	750	750	750	750	4,500	
	Value (£)	..	..	840	840	840	840	840	840	5,040	
(ii) Coaching Stock (Bogies) . . .	Imports (Nos.)	..	..	400	400	400	400	400	400	2,400	(Actual Nos.)
	Value (£)	..	..	3,300	3,300	3,300	3,300	3,300	3,300	19,800	

III. Statements Showing Consumption, Production, Import and Export (Quantity and Value) of other important Commodities

(All figures in thousands)

(1)		1949-50 (2)	1950-51 (3)	1951-52 (4)	1952-53 (5)	1953-54 (6)	1954-55 (7)	1955-56 (8)	1956-57 (9)	1951-57 (Total) (10)	Remarks (11)
(1) Coal											
Consumption	(Tons)	27,900	28,600	29,200	29,800	30,400	31,000	31,600	32,200	184,200	
Production	(Tons)	31,400	32,000	32,600	33,200	33,800	34,400	35,000	35,600	204,600	
Imports	(Tons)	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	
Exports	(Tons)	2,700	1,400	1,500	1,600	1,700	1,800	1,900	2,000	10,500	
Exports—Value F. O. B.	(£)	6,000	3,200	3,400	3,600	3,800	4,000	4,300	4,500	23,600	
(2) Oil (Petroleum Products)											
Consumption	(Tons)	2,708	3,174	3,666	4,032	4,435	4,878	5,367	5,903	28,281	
Production	(Tons)	228	224	201	194	176	160	147	136	1,014	
Imports	(Tons)	2,480	2,950	3,465	3,838	4,259	4,718	5,220	5,767	27,267	
Imports—Value C.I.F.	(£)	31,880	39,630	45,760	50,350	55,390	60,920	67,000	73,690	353,110	
Exports	(Tons)	21	21	19	19	19	19	19	19	114	
Exports—Value F.O.B	(£)	1,500	1,900	1,700	1,700	1,700	1,700	1,700	1,700	10,200	
(3) Jute (Manufactured)											
Consumption	(Tons)	133	140	140	140	140	140	140	140	840	
Production	(Tons)	853	1,080	1,080	1,080	1,080	1,080	1,080	1,080	6,480	
Imports	..	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	
Exports	(Tons)	751	855	855	855	855	855	855	855	5,130	
Exports—Value F.O.B.	(£)	89,200	115,000	115,000	115,000	115,000	115,000	115,000	115,000	690,000	
(4) Cotton											
Consumption	(Tons)	764	764	982	1,018	1,055	1,091	1,145	1,200	6,491	*
Production	(Tons)	510	625	691	740	758	776	795	813	4,573	†
Imports	(Tons)	205	228	362	350	368	385	420	455	2,340	
Imports—Value C.I.F.	(£)	78,375	78,000	123,750	120,000	126,000	132,000	144,000	156,000	801,750	
Exports	(Tons)	35	35	35	35	35	35	35	35	210	
Exports—Value F.O.B.	(£)	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	36,000	
(5) Tea including Tea Chests											
(i) *Tea*											
Consumption	(Tons)	69	69	69	69	69	69	69	69	414	
Production	(Tons)	255	255	255	255	255	255	255	255	1,530	
Imports	(Tons)	5	5	5	5	5	5	5	5	30	
Imports—Value C.I.F.	(£)	83	83	83	83	83	83	83	83	498	
Exports	(Tons)	187	187	187	187	187	187	187	187	1,122	
Exports—Value F O B.	(£)	51,500	51,500	51,500	51,500	51,500	51,500	51,500	51,500	309,000	

(ii) *Tea Chests*											
Consumption	(In square feet)	99,000	99,000	104,000	104,000	109,000	109,000	115,000	115,000	656,000	
Production	(In square feet)	38,900	68,000	90,000	104,000	109,000	109,000	115,000	115,000	642,000	
Imports	(In square feet)	18,000	17,100	14,000	Nil	Nil	Nil	Nil	Nil	14,000	
Imports—Value C.I.F.	(£)	337	321	263	Nil	Nil	Nil	Nil	Nil	263	
Exports	(Tons)		Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	
Exports—Value F.O.B.	(£)		Nil	Nil	Nil	Nil	Nil	Nil	Mil	Nil	
(6) Tobacco											
Consumption	(Tons)	139	157	173	191	212	233	236	281	[1,503	
Production	(Tons)	169	233	233	233	233	233	233	233	[1,631	
Imports	(Tons)	3	3	3	3	3	3	3	3	18	
Imports—Value C.I.F.	(£)	1,588	1,588	[1,588	1,588	1,588	1,588	1,588	1,588	[6,352	
Exports	(Tons)	33	33	33	33	33	33	33	33	198	
Exports—Value F.O.B.	(£)	7,370	7,370	[7,370	7,370	7,370	7,370	7,370	7,370	[44,220	
(7) Rayon											
(a) *Rayon Yarn*											
Consumption	(Tons)	13	20	23	23	27	27	31	31	162	
Production	(Tons)	5	4	5	9	11	11	14	14	64	
Imports	(Tons)	13	17	17	14	16	16	18	18	99	
Imports—Value C.I.F.	(£)	7,240	8,340	[8,570	6,890	7,900	7,900	9,000	9,000	[46,170	
Exports		Nil	*Nil*	Nil	Nil	Nil	Nil	Nil	Nil	Nil	
(b) *Art Silk Fabrics*											
Consumption	(Tons)	12	19	21	21	25	25	29	29	150	
Production	(Tons)	13	20	23	23	27	27	31	31	162	
Imports	(Tons)	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	
Exports	(Tons)	1	1	2	2	2	2	2	2	12	
Exports—Value F.O.B.	(£)	1	2	2	2	2	2	2	2	12	
(8) Salt											
Consumption	(Tons)	2,240	2,420	2,640	2,710	2,780	2,850	2,920	3,000	[16,900	
Production	(Tons)	2,050	2,390	2,760	3,010	3,260	3,510	3,760	4,030	20,330	
Imports	(Tons)	330	110	Nil	Nil	Nil	Nil	Nil	Nil	Nil	
Imports—Value C.I.F.	(£)	1,430	474	Nil	Nil	Nil	Nil	Nil	Nil	Nil	
Exports	(Tons)	140	80	120	300	480	660	840	1,080	[3,430	
Exports—Value F.O.B.	(£)	579	320	480	1,200	1,920	2,640	3,360	4,180	[13,720	
(9) Pig Iron											
Consumption	(Tons)	1,630	1,650	1,650	1,715	1,806	2,001	2,053	2,248	11,473	
Production	(Tons)	1,660	1,660	1,660	1,715	1,816	2,011	2,063	2,258	[11,533	
Imports		Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	
Exports	(Tons)	30	10	10	10	10	10	10	10	60	
Exports—Value F.O.B.	(£)	200	67	67	67	67	67	67	67	382	‡

*Calculated on the bases of 5½ Bales to a ton.

†Includes factory consumption.

‡Calculated at £67 per ton.

APPENDIX II

(TABLE "B" OF THE QUESTIONNAIRE)

STATEMENT I . . . . . Cost of Development by Public Authorities (Central and States Governments).

STATEMENT II . . . . . Cost of Development by Public Authorities (Central Government).

STATEMENT III . . . . . Cost of Development by Public Authorities (States Governments).

STATEMENT I

COST OF DEVELOPMENT BY PUBLIC AUTHORITIES (CENTRAL AND STATES GOVERNMENTS)

(Figures in millions of rupees)

	1950-51	1951-52		Total	1951-57 (Six years' Total) External	
		Total	External		Hard currencies	Soft currencies
AGRICULTURE :						
Foodstuffs, Industrial Tree and Plantation Crops . . .	577·0	500·2	53·6	2,738·9	117·1	83·8
Major Irrigation and Multi-purpose Projects . .	551·7	911·7	231·5	3,340·7	281·5	505·8
TOTAL . .	1,128·7	1,411·9	285·1	6,079·6	398·6	589·6
TRANSPORT :						
(including Communications)						
Railways . .	495·8	600·0	128·3	4,800·0	100·0	500·0
Roads . . .	145·0	165·0	6·0	1,099·0	..	52·0
Ports and Harbours	10·2	32·7	7·5	110·0	..	20·0
Inland Waterways .	..	1·0	..	1·2	..	..
Shipping . .	18·9	12·2	2·5	199·7	1·0	8·0
Air Transport . .	23·8	30·0	2·5	200·0	..	16·5
Posts and Telegraphs	59·7	90·0	18·0	540·0	5·0	100·0
Overseas Communications . .	..	..	..	20·0	1·0	10·0
Meteorological Department . .	1·3	1·0	0·2	7·5	..	1·4
Broadcasting . .	6·0	3·0	5·5	50·0	15·0	12·0
TOTAL . .	760·7	934·9	170·5	7,027·4	122·0	719·9
FUEL AND POWER :						
Power Projects .	225·1	214·5	64·0	575·9	26·0	104·0
OTHER MINING . .	0·6	0·6	0·1	15·0	0·5	0·2
INDUSTRY . . .	289·0	375·9	1,36·5	1,784·8	310·8	766·8
SOCIAL CAPITAL :						
Housing . .	10·8	36·0	..	183·2	..	..
Buildings . .	..	30·0	..	280·0	..	..
Health . . .	78·9	75·2	8·6	514·6	27·3	27·4
Education . .	127·9	161·5	23·9	1,143·9	29·9	42·9
Rehabilitation .	207·0	250·0	..	750·0	..	..
Others . . .	94·1	20·0	..	41·0	..	..
TOTAL . .	518·7	572·7	32·5	2,912·7	57·2	70·3
GRAND TOTAL .	2,922·8	3,510·5	688·7	18,395·4	915·1	2,250·8

APPENDIX II

Cost of Central Development Schemes proposed for inclusion in the Six-Year Plan

(Figures in millions of rupees)

	1949-50	1950-51	1951-52		1951-57 (Six years' Total)		
					Total	External	
			Total	External		Hard currencies	Soft currencies
Agriculture :							
Foodstuff Industrial Tree and Plantation Crops . . .	255·4	280·6	300·2	53·1	1,488·9	107·1	63·8
Major irrigation and Multi-purpose projects	148·8	260·5	404·4	135·5	1,691·0	207·5	209·8
Total . . .	404·2	541·1	704·6	188·6	3,179·9	314·6	273·6
Transport : (including Communications)							
Railways . . .	689·4	495·8	600·0	128·3	4,800·0	100·0	500·0
Roads . . .	14·9	20·0	40·0	..	300·0	..	12·0
Ports and Harbours .	1·5	10·0	32·5	7·5	100·0	..	20·0
Inland Waterways .	..	..	1·0	..	1·2	..	..
Shipping . . .	..	18·9	12·2	2·5	199·7	1·0	8·0
Air Transport . .	25·2	23·8	30·0	2·5	200·0	..	16·5
Posts and Telegraphs .	41·3	59·7	90·0	18·0	540·0	5·0	100·0
Overseas Communications . . .	..	..	..	..	20·0	1·0	10·0
Meteorological Department . . .	0·7	1·3	1·0	0·2	7·5	..	1·4
Broadcasting . .	6·3	6·0	3·0	5·5	50·0	15·0	12·0
Total . . .	779·3	635·5	809·7	164·5	6,218·4	122·0	679·9
Fuel and Power : Power Projects . .	..	..	..	..	..	..	..
Other Mining . .	..	0·6	0·6	0·1	15·0	0·5	0·2
Industry . . .	188·9	200·6	315·9	136·0	1,537·8	300·8	736·8
Social Capital :							
Housing . . .	1·4	10·8	36·0	..	183·2	..	..
Building . . .	..	..	30·0	..	280·0	..	..
Health . . .	..	..	5·2	0·6	47·6	1·0	1·0
Education . . .	27·6	25·5	41·5	10·9	353·9	19·9	22·9
Rehabilitation . .	229·9	207·0	250·0	..	750·0	..	..
Total . . .	258·9	243·3	362·7	11·5	1,614·7	20·9	23·9
Grand Total .	1,631·3	1,621·1	2,193·5	500·7	12,565·8	758·8	1,714·4

STATEMENT III

Cost of Development Schemes of States Governments proposed for inclusion in the Six-Year Plan

(Figures in millions of rupees)

	Expenditure up to March, 1950	1950-51	1951-52		1951-57 (Six years' Total)		
			Total	External	Total	External	
						Hard currencies	Soft currencies
Agriculture:							
Foodstuffs, Industrial, Tree and Plantation Crops	497·9	296·4	200·0	0·5	1,250·0	10·0	20·0
Major irrigation and Multi-purpose Projects	267·4	291·2	507·3	96·0	1,649·7	74·0	296·0
Total	765·3	587·6	707·3	96·5	2,899·7	84·0	316·0
Transport:							
Roads	205·8	125·0	125·0	6·0	799·0	..	40·0
Ports and Harbours	0·1	0·2	0·2	..	10·0	..	0·2
Total	205·9	125·2	125·2	6·0	809·0	..	40·2
Fuel and Power:							
Power Projects	488·9	225·1	214·5	64·0	575·9	26·0	104·0
Other Mining	..	..	..	..	..	..	..
Industry	88·4	88·4	60·0	0·5	247·0	10·0	30·0
Social Capital:							
Health	158·3	78·9	70·0	8·0	467·0	26·3	26·4
Education	133·7	102·4	120·0	13·0	790·0	10·0	20·0
Others	95·1	94·1	20·0	..	41·0	..	..
Total	387·1	275·4	210·0	21·0	1,298·0	36·3	46·4
Grand Total	1,935·6	1,301·7	1,317·0	188·0	5,829·6	156·3	536·6

APPENDIX III

(Table "C" of the Questionnaire)

(*Referred to in para. 24 of the Report*)

STATEMENT I . . . Balance of Payments actuals for 1949 and estimates for 1950-51 to 1952-53.
STATEMENT II . . . Estimates of Foreign Exchange Resources—ALL AREAS—for 1950-51, 1951-52 and 1952-53.
STATEMENT III . . . Estimates of availale Foreign Exchange resources—NON-DOLLAR AREA—for 1950-51, 1951-52 and 1952-53.

TABLE "C"

STATEMENT I

INDIAS BALANCE OF PAYMENTS

ACTUALS FOR 1949 AND ESTIMATES FOR 1950-51 TO 1952-53 (Figures in millions)

	1949 Actuals			1950—51			1951-52			1952—53		
	$	Non-$	Total	$	Non-$	Total	$	Non-$	Total	$	Non-$	Total
Imports C.I.F.												
Food and feeding stuffs	*15·7*	*73·8*	*99·5*	*16·0*	*59·9*	*75·9*	*18·0*	*85·1*	*103·1*	*22·6*	*79·0*	*101·6*
Wheat	10·6	34·8	45·4	..	30·0	30·0	..	37·0	37·0	..	37·0	37·0
Rice	..	23·0	23·0	..	10·0	10·0	..	20·0	20·0	..	20·0	20·0
Other	5·1	26·0	31·1	16·0	19·9	35·9	18·0	28·1	46·1	22·6	22·0	44·6
Developmental Commodities	*53·2*	*85·4*	*138·6*	*51·1*	*90·8*	*141·9*	*55·7*	*109·3*	*165·1*	*55·3*	*113·7*	*169·0*
Steel	3·4	9·9	13·3	4·0	13·0	17·0	4·0	14·9	18·9	3·0	16·8	19·8
Non-ferrous metals	6·7	5·7	12·4	12·0	11·2	23·2	11·1	14·0	25·1	12·2	13·0	25·2
Timber	0·1	1·9	2·0	0·1	1·7	1·6	0·1	4·9	5·0	0·1	5·3	5·4
Cement	0·1	3·6	3·7	..	0·4	0·4	..	..	..	..	..	..
Fertiliser	0·8	3·1	3·9	..	10·5	10·5	..	*19·3*	1·63	19·3	15·0	15·0
Machinery and equipment	21·1	47·0	68·1	20·0	38·2	58·2	*21·5*	39·0	60·5	22·0	47·0	69·0
Vehicles, communication equipment and railway stores	21·0	14·1	35·1	15·0	15·8	30·8	19·0	17·2	36·2	18·0	16·6	34·6
Other Industrial Raw Materials	*12·6*	*110·6*	*122·6*	*36·2*	*132·9*	*169·1*	*45·7*	*122·1*	*167·8*	*37·9*	*119·6*	*157·5*
Consumer goods, etc.	*8·9*	*71·0*	*79·9*	*14·3*	*80·9*	*95·2*	*26·7*	*87·9*	*114·6*	*28·1*	*98·7*	*126·8*
Defence stores, munitions and arms	*1·4*	*9·0*	*10·4*	*2·0*	*17·3*	*19·3*	*4·9*	*22·8*	*27·7*	*4·6*	*23·6*	*28·2*
Total Imports	*91·8*	*359·2*	*451·0*	*119·6*	*381·8*	*501·4*	*151·0*	*427·2*	*578·3*	*148·5*	*434·6*	*583·2*
Invisible Payments	*10·7*	*81·3**	*92·0*	*12·5*	*73·7*	*86·2*	*13·0*	*73·7*	*86·7*	*13·5*	*73·7*	*87·2*
TOTAL PAYMENTS	*102·5*	*440·5*	*543·0*	*132·1*	*455·5*	*587·6*	*164·0*	*500·9*	*665·0*	*162·0*	*508·3*	*670·4*
Exports F.O.B.												
Jute Manufactures	36·8	55·2	92·1	31·9	94·1	126·0	55·0	80·2	135·2	55·2	85·1	140·4
Tea	9·1	50·3	59·4	8·5	62·2	70·7	9·0	59·9	69·0	9·6	59·0	68·7
Cotton Manufactures	..	34·3	34·3	..	41·6	41.6	..	46·0	46·0	..	46.0	46·0
Others	27·8	100·5	128·3	23·8	108·9	132·7	34·4	105·3	139·7	35·0	114·2	149·2
Total Exports	*73·7*	*240·5*	*314·2*	*64·2*	*306·8*	*371·0*	*98·4*	*291·4*	*389·9*	*99·8*	*304.3*	*404·2*
Invisible Receipts	*9·6*	*100·5*	*109·5*	*9·0*	*103·0*	*112·0*	*9·1*	*103·0*	*112·1*	*9·2*	*103·0*	*112·2*
TOTAL RECEIPTS	*82·7*	*341·0*	*423·8*	*73·2*	*409·8*	*483·0*	*107·5*	*394·4*	*502·0*	*109·0*	*407·3*	*516·4*
Current Account Deficit—	*—19·8*	*—99·4*	*—119·2*	*—58·9*	*—45·7*	*—104·6*	*—56·5*	*—106·5*	*—163·0*	*—53·0*	*—101·0*	*—154·0*

This statement excludes transactions with Pakistan and assumes external aid in 1951-52 and 1952-53.

*Includes an extraordinary payment of £9 million to U.K. on account of defence stores.

TABLE "C"—*contd.*

STATEMENT II

ESTIMATES OF AVAILABLE FOREIGN EXCHANGE RESOURCES

ALL AREAS

(In £ million)

	1950-51	*1951-52*	*1952-53*
Sterling Release (less Trans-fer to Pakistan)*	100·0	35·0	35·0
I.B.R.D. loan proceeds	4·6	—	
	104·6	35·0	35·0
Total expected receipts	112·0	112·1	112·2
Invisibles	371·0	389·9	404·2
Exports	483·0	502·0	516·4
Total finance available	587.6	537.0	551·4
Invisible payments	86.2	86.7	87·2
Total available for imports without aid	501·4	450·3	464·2
Aid	..	128·0	119·0
Total available for imports with aid	501·4	578·3	583·2

Based on the current size of sterling release and estimated past transfer to Pakistan.

STATEMENT III

ESTIMATES OF AVAILABLE FOREIGN EXCHANGE RESOURCES

NON-DOLLAR AREA

(In £ million)

	1950-51	*1951-52*	*1952-53*
Sterling Release (less Transfer to Pakistan)*	100·0	35·0	35·0
of which For Dollar Area	54·3	20·5	19·5
Available for Non-Dollar Area	45·7	14·5	15·5
Receipts	306·8	291·4	304·3
Exports	103·0	103·0	103·0
Other receipts	379·8	394·4	407·3
Total Finance	455·5	408·9	422·8
Invisible Payment	73·7	73·7	73·7
Total level of imports	381·8	335·2	349·1
Aid		92·0	85·5
	381·8	427·2	434·6

Based on the current size of sterling release and estimates transfers to Pakistan based on past figures

APPENDIX IV

(Table D of the Questionnaire)

MAIN TABLE "D"

ANNEXURE I	Item 12	A note on "Land Tenure System in India".
ANNEXURE II	Items 13 and 15 . .	Statementshowing production and yield per acre of principal crops in India.
ANNEXURE III	Item 28	Statement showing total route mileage of Railways in India.
ANNEXURE IV	Item 30	Statement showing the number of Railway Wagons and their capacities.
ANNEXURE V	Item 41 and 42 . .	Statement showing production and consumption of Petroleum products.

TABLE "D"

Items	Years					Remarks
	1938-39	1945-46	1946-47	1947-48	1948-49	
POPULATION						
(1) (*a*) Total Population	—	—	—	—	347·34	These estimates have been framed on the assumption that the relative change in the distribution of population in these age-groups between 1941 and 1951 is negligible for all practical purposes.
(*b*) Total Population (divided by age-groups):						
0—15 .	—	—	—	—	138·94	
15—35 .	—	—	—	—	118·10	
35—55 .	—	—	—	—	65·99	
Over 55 .	—	—	—	—	24·31	
(figures in millions)						
(2) Division of population, between urban and rural areas.	URBAN—13·79 per cent. RURAL—86·21 per cent. according to census. 1941					The information given is according to 1941 census, with reference to post-Partition boundaries. Since then there has been considerable shifts of polpulation from the rural areas to the urban areas.
(3) Economically active population:						
(*a*) Agriculture (including animal husbandry)	—	72·2	68·3	—	72·7	
(*b*) Mining . .	—	0·5	0·5	—	0·5	The figures relate to the Union Provinces.
(*c*) Industry . .	—	21·6	19·5	—	22·7	
(*d*) Services:						
(i) Public forces .	..	2·4	2·4	—	2·4	
(ii) Other services	..	10·2	15·2	—	10·6	
Total (Active population (figures in millions).	—	108·9	105·9	—	108·9	
(4) Expected rate of growth of population during the next five to ten years.	—	—	—	—	1 per cent. per annum.	
(5) (*a*) Birth rate (expressed per 1,000)	—	—	—	—	25·7	The rates are estimates based on the reported births and deaths for 1949 for India.
(*b*) Total number of births per year.	—	6,86,7012	6,887,221	6,403,398	6,155,755	
(6) (*a*) Death rate (expressed per 1,000)	—	—	—	—	15·2	
(*b*) Total number of deaths per year.	—	5,409,238	4,588,492	4,738,730	4,149,266	
(7) (*a*) Infantile mortality rate (expressed per 1,000).	—	—	—	—	120·7	
(*b*) Number of children dying in first year of life.	—	—	—	—	819,903	

TABLE "D"—*contd.*

Items	Years					Remarks
	1938-39	1945-46	1946-47	1947-48	1948-49	
POPULATION—*contd.*						
(8) Recent trend of—						
(*a*) *Immigration* :						
Normal		Not available		230,340	284,532	The category "displaced persons" relates to population movement from India to Pakistan and *vice versa* as a result of partition in 1947.
Displaced persons	—	—	—	5,000,000	1,300,000	
(*b*) *Emigration* :						
Normal	80,730	77,677	186,790	530,471	309,806	
Displaced persons	—	—	—	5,800,000 (1947-49)	—	
NATIONAL INCOME						
(9) Gross national product.—						
(*a*) On the basis of current prices. (Rs. in millions).	—	57,280	64,070	—	80,620	These estimates relate to the Indian Union Provinces excluding the former Princely Indian States.
(*b*) On the basis of constant prices. (Rs. in millions).	—	23,380	23,300	—	21,500	The base year relates to 1931-32.
(*c*) Gross national product per head of population at constant prices.	—	97	95	—	84	The estimates against item No. 9 are very rough and reflect only the trend.
AGRICULTURE						
(10) Acreage of cultivable land (million acres).	338·0	383·2	382·9	397·7	Not given.	
(11) Acreage of land under cultivation (million acres.)						
(*a*) Arable	251·8	294·9	294·5	305·9	Not given	
(*b*) Pasture	86·2	88·3	88·4	91·8	Not given	
(*c*) Forest	73·6	82·0	79·7	86·5	Not given	
(12) System of land tenure	Please see Annexure I					
(13) Production of Main Crops in tons.	Please see Annexure II					
(14) Consumption of main foodstuffs (in thousand tons).	45,860	42,657	43,029	45,054	44,950	It includes net production plus net imports.
(15) Yield per acre of main crops.	Please see Annexure II					
(16) Consumption of fertilisers (in thousand tons) :						
(*a*) Ammonium Sulphate.	—	176	166	111	166	
(*b*) Ammonium Phosphate	—	6	7	8	10	
(*c*) Super Phosphate	—	1	1	1	1	
(*d*) Others	—	—	—	15	32	This includes Ammonium and Sodium Nitrate.
(17) Number of agricultural tractors.	—	4,500	—	—	10,000	The figures indicated are broad estimates.
INDUSTRY						
(18) Production of steel ingots (in thousand tons).	1,001	1,340	1,280	1,250	1,280	
(19) Production of non-ferrous ores and other minerals :						
(*a*) Non-ferrous ores (Copper, lead bauxite chrome) (in thousand tons).	—	393·6	377·1	366·8	350·9	

TABLE "D"—*contd.*

Items	Years					Remarks
	1938-39	1945-46	1946-47	1947-48	1948-49	
POPULATION—*contd.*						
(b) (Manganese ore :						
(i) Over 48% metal content.	—	184·2	331·25	370·6	389·0	
(ii) With 42% metal content.	—	68·6	138·5	155·2	163·0	
(c) Mica . . .	—	10·5	9·6	18·1	13·5	These are figures of exports.
(20) Production of non-ferrous metals (in thousand tons).	—	9	10	10	10	
(21) Consumption of non-ferrous metals (in thousand tons).	51	62	120	77	104	
(22) Production of textiles :						
(a) Cotton (in million yards).	—	—	—	—	5,034 (1949-50)	
(b) Rayon (in million lb.)	—	—	—	—	—	
(c) Wool (in million lb.)	7	30	27	24	20	
(d) Yarn (in million lb.)	1,103	1,085	962·3	1,034·6	1,040·0	
(e) Jute (in thousand tons).						
(23) Consumption of textiles :						
(a) Cotton (in million yards).	—	—	—	—	4,262 (1949-50)	
(b) Rayon (in million lb.)	17·0	1·8	8·0	10·0	40·0	
(c) Wool (in million lb.)	19	21	21	21	21	
(d) Yarn (in million lb.)	121	246·4	150·1	12·4	141·5	
(e) Jute in thousand tons).						
(24) Production of cement (in thousand tons).	1,510	2,080	1,510	1,460	1,640	
Supplementary information about other industries of significance to the economy.						
SUPPLEMENTARY ITEM :						
(a) Production of sugar (in thousand tons).	640	920	900	1,070	1,000	
(b) Consumption of sugar (in thousand tons).	750	1,110	870	1,020	1,120	
(c) Production of paper (in thousand tons).	59	108	101	94	98	
(d) Consumption of paper (in thousand tons).	104	133	136	134	169	
(e) Production of vanaspati oil (in thousand tons).	44	132	135	95	130	
(f) Consumption of vanaspati oil (in thouand tons).	38	134	137	91	133	
(g) Production of tanned leather (in thousand tons).	102	109	104	108	86	
(h) Consumption of tanned leather (in thousand tons).	81	98	80	89	71	
(i) Production of chemicals (in thousand tons.)	39	102	99	119	139	
(j) Consumption of chemicals (in thousand tons).	144	228	194	217	273	
(k) Production of cigarettes (in millions).	—	—	16,334	18,880	20,551	
(l) Consumption of cigarettes (in millions.)	—	—	15,888	19,296	20,502	
(m) Production of matches (figures in thousands.)	—	446	420	502	523	The figures relate to cases of 50 gross boxes—each box containmg sixty sticks.
(n) Consumption of matches (figures in thousands.)	—	420	400	450	470	

TABLE "D"—*contd.*

Items	Years					Remarks
	1938-39	1945-46	1946-47	1947-48	1948-49	
(*o*) Production of glass (in thousand tons).	35	90	..	80	69	In these cases glass bangles have been excluded.
(*p*) Consumption of glass (in thousand tons).	124	..	138	143	150	
(*q*) Production of motor vehicles:						
(*i*) Cars (in thousands).	..	..	..	12·0	6·0	Figures relate to calendar year 1948 and 1949.
(*ii*) Trucks (in thousands.)	..	..	..	15·7	14·5	
(*r*) Consumption of motor vehicles:						
(*i*) Cars (in thousands)	..	..	..	20·0	20·0	
(*ii*) Trucks (in thousands.)	..	..	..	30·0	20·0	
TRANSPORT						
(25) Length in miles of roads fit for motor transport (in thousand miles):						
(*a*) Motorable in fair weather only.	..	..	..	..	71	
(*b*) Motorable in all weather.	..	..	..	..	111	
TOTAL					182	
(26) Number of mechanically-drawn load-carrying vehicles (figures in thousands).						
(*a*) Public Goods Carrier	..	..	..	..	40·2	
(*b*) Private Goods Carrier	..	..	..	..	21·7	
Total .					61·9	
(27) Length of land water-ways.	..	..	..	..	6,300 miles.	Out of this, only 3,294 miles is navigable by steam vessels.
(28) Length and gauge of single and double-track railways in miles.	Please see Annexure III					
(29) Number and approximate average age of locomotives:						
(*a*) Number .	5,721	6,189	6,418	7,428	7,510	It includes both broad gauge and meter gauge locomotives.
(*b*) Average age .	24½ years.	28 years.	28 years.	27½ years.	27 years.	
(30) Number of railway wagons and their carrying capacity.	Please see Annexure IV					
(31) Number and capacity in tons of ports for oceangoing vessels:						
(*a*) Number of ocean-going vessels.	..	..	..	..	5,692	
(*b*) Capacity in tons for ocean-going vessels.	..	..	..	..	23,340,652 (gross. tonnage)	
32) Tonnage of goods per annum handled by ports.	..	..	..	..	18,354,380	The figures for items 31 and 32 are the total for six main ports, viz., Bombay, Madras, Calcutta, Cochin, Kandla and Vizagapatam.
(33) (*a*) Number of coastal fleet.	Not available			52	63	The deadweight tonnage includes the Cargo carried on the east of India and Pakistan.
(*b*) Deadweight tonnage of coastal fleet.	140,000	..	..	197,000	273,000	

TABLE "D"—*contd.*

Items	Years					Remarks
	1938-39	1945-46	1946-47	1947-48	1948-49	
(34) Tonnage (and where possible tons miles) carried annually on :						
a) Public Goods Carrier	..	..	..	..	937·9	Annually.
b) Private Goods Carrier.	..	..	..	..	233·2	Annually.
(*c*) Railway wagons :						
(i) Tons carried .	88·4	100·6	91·5	73·5	82·6	
(ii) Net tons miles (figures in millions) .	22,159·0	29,166·5	26,981·3	20,398·3	22,748·2	
(*d*) Coastal shipping (figures in thousands).	Not available		2,574·8	2,436·1	2,681·2	This is annual tonnage of cargo carried on coastal shipping.
(35) Tonnage carried by animal drawn vehicles (in million tons.)	..	—	..	..	10·3	
(36) Fuel consumption by :						
(*a*) Road vehicles—motor spirit.	330·3	1,098·5	367·5	437·4	465·1	
(*b*) Road vehicles—diesel oil.	8·3	..	31·5	38·0	Not available.	
(*c*) Railways . . (figures in thousand tons).	7,515·5	9,803·7	10,188·4	8,248·8	9,033·6	For fuel consumption for locomotives, oil fuel and wood have been converted in terms of coal on the basis of relative consumption and the total has then been indicated.
FUEL AND POWER						
(37) Generating capacity for electricity (in kilowatts.) :						
(*a*) Hydro-electric .	..	—	..	..	504,154	
(*b*) Thermal electric .	..	..	..	..	895,256	
(38) Output of electricity (in m. k. w.).	..	..	..	..	4,575·5	
(39) Production of coal (million tons).	27·7	28·9	29·2	30·0	31·4	
(40) Consumption of coal (million tons).	Not available	24·6	25·6	25·1	27·9	
(41) Production of petroleum, crude oil and other products.	Please see Annexure V.					
(42) Consumption of petroleum products.						
COMMUNICATIONS						
(43) Number of telephones installed.	..	..	..	..	129,616	
(44) Number of Radio-sets installed.	..	..	..	..	404,234	
WATER						
(45) Existing acreage dependent on irrigation canals for :						
(*a*) Single crops (million acres).	17·2	—	20·5	19·7	..	For "Double crops" area, separate figures are not available for canals and wells. The figures indicated against item No. 46(*b*) thus cover all sources of irrigation.
(*b*) Double crops (million acres).						
(46) Existing acreage dependent on tube-wells or other types or irrigation for :						
(*a*) Single crops (million acres).	26·0	..	27·9	26·8	—	
(*b*) Double crops (million acres)	3·8	..	4·2	3·4	—	

TABLE "D"—*contd.*

Items	Years					Remarks
	1938-39	1945-46	1946-47	1947-48	1948-49	
LABOUR						
(47) Number of workers employed in—						The returns of Mines relate to areas formerly known as British India only. The figures for 1947-48 and 1948-49 relate to Indian Union only. Previous figures relate to undivided India only.
(*a*) Factories	1,731·1	2,643·0	2,314·6	2,274·7	2,300·2	
(*b*) Mines	365·3	386·3	412·7	407·3	395·9	
(Figs. in thousands).						
(*c*) Railways	645·5	939·8	982·3	832·2	850·2	
(48) Number of technical Colleges and training Institutes—						
(*a*) Engineering	17	16	12	16	26	
(*b*) Technology	2	5	6	6	8	
(*c*) Commerce	7	20	14	18	16	
(*d*) Agriculture	6	11	9	12	16	
(49) Annual output of Technicians from Technical Colleges, etc. (figs. in thousands).						
(*a*) Colleges	2·2	6·1	7·8	7·9	12·1	
(*b*) Schools	9·8	10·2	9·8	8·8	13·8	
(*c*) Govt. Training Centres.	Nil	10·3	Nil	5·5	10·2	These training Centres are intended to impart Technical Education and are open to all.
(50) Average annual number of Technicians trained overseas.	..	..	..	..	518 (Govt.) 300 (Private)	Since 1945, 1,053 Govt. Scholars and 1,500 Private Students have received training.
HEALTH & EDUCATION						
(51) Number of qualified Doctors.	47,400	..	..	..	51,405	
(52) Number of Hospitals beds.	74,117	..	..	..	172,600	
(53) Number of places in schools, related to number of children aged 5 to 15 years—						
(*a*) Number of children —age group 5—15.	..	..	..	..	84·5 (million)	The percentage of children in school to estimated population works out at 23·6 per cent.
(*b*) Number of children in Primary & Secondary Schools.	..	..	..	..	20·2 (million)	
(54) Proportion of population which is illitrate.	..	..	..	..	82 per cent	
(55) Number of University Students graduating in—						
(*a*) Arts	..	..	..	..	16,870 per year.	
(*b*) Science	..	..	..	..	8,200 per year.	
(*c*) Technology	..	..	..	..	590 per year.	
(56) Number of students qualifying from Technical Schools.	..	..	..	..	6,000 (estimated)	
FOREIGN TRADE						
(57) Value of Imports c.i.f. (In millions of Rupees).	155,55	293,22	335,58	445,58	527,25	Includes private and Govt. accounts.
(58) Value of Export f.o.b. (In millions of Rupees).	169,83	266,43	320,78	418,81	423,32	Includes private and Govt. accounts; also includes re-exports.

ANNEXURE I

TABLE "D"—Item 12

System of Land Tenures Types and Size of Individual Holdings (Average)

I. Types of Land Tenures :

Prevailing System of Land Tenure

There are three main land tenure systems in India : (i) the permanently settled zamindari (estate system) prevailing in most parts of West Bengal, Bihar, about one-half of Orissa and about one-third of Madras and a small proportion of Assam and U.P. ; (ii) the temporary settled zamindari prevailing in the Uttar Pradesh, Madhya Pradesh, one-fourth of Orissa and in some other States ; (iii) the ryotwari system (a form of individual ownership) prevailing in the rest of the country, subject to some local variations. Under the ryotwari system, revenue is fixed on individual pieces of land and actual occupants become liable for its payment while in temporary settled zamindari estate system the revenue is fixed for the estate and the holder or properitor of the estate is responsible for the payment of land revenue.

Abolition of zamindari system

The two hundred years old zamindari system is being replaced by ryotwari system in most of the States. The acquisition of zamindari consists of three steps namely, (i) vesting of estates in the Government ; (ii) payment of compensation ; (iii) settlement with the tenants. The management of zamindari estates has been assumd by the State Governments under the various Management of Estate Acts. This measure is undertaken (*a*) to give immediate relief to the tenants ; (*b*) to check destruction of records and property ; (*c*) to provide additional income to the Government. After the vesting of the estates in the Government, it is proposed to hand over their management to Gaon Sabhas, village Panchayats or Co-operative Societies as the case may be. The problem of compensation has two aspects, viz., equity and economy. The measures will ensure that the amount of compensation payable under these Acts will be reasonable to all parties. Total compensation to the outgoing proprietors and right-holders is based on their present net incomes or assets. The present net income is calculated with reference to the gross income and the expenses usually borne by the landholders. The "home farms" which are personally cultivated by the landlords will be settled with them according to the new tenure. Rest of the lands will be settled with the existing tenants. The abolition of zamindari is [illegible] to be a Socio-economic reform aimed at the restoration of the natural land tenure system which prevailed before the introduction of permanent sttlement by Lord Cornwallis. It will eliminate the long line of intermediaries between the State and the people and will eliminate the absentee landlords who performed no economic functions. Another consequence of the reform will be an improvement in agricultural statistics in the permanently settled areas which are at present notably unreliable and inadequate. Financially too, these schemes are justifiable for the gain in land revenue will be sufficient to pay off all obligations and to leave a surplus over and above the interest and amortization charges.

Tenancy

The most important problem in agriculture is the creation of a system of tenancy and land management that will lead to maximum efficiency and will answer the dynamic needs of the times. It is being recognised now that the present system of dual rights of the landlords and the tenants has created an impasse wherein neither the tenant nor the landlord finds sufficient incentive to put in his best efforts. Settlement of lands under zamindari abolition legislation will remove some of the more glaring inequities and will solve some of the problems of tenancy, since henceforward the cultivators will themselves own the lands they cultivate. In order to avoid large lands remaining with the zamindars, it is provided that only lands personally cultivated by them will remain with them the rest being acquired by the Government under the reforms. The recent tenancy legislation falls into three groups as follows :—

1. Legislation designed to stop eviction of tenants by the Zamindars.
2. Legislation to simplify the land tenure system.
3. Legislation to control the conduct of tenancy in ryotwari areas.

The new system envisaged under the land reforms is a variety of "peasant proprietorship" Problems of tenancy can as well exist in the ryotwari area though its nature and magnitude will be different. Main problems of tenancy in such areas are :—

(i) Security of tenure ;

(ii) Reduction of rent ;

(iii) Regulation of share-cropping ;

(iv) Encouragement of peasant farming.

II — Size of Land Tenures

One of the reasons for the backwardness of Indian Agriculture is the extremely small size of the average holding. The population dependent upon agriculture has increased greatly but

there has been no corresponding increase in the net area sown. This has resulted in a steady decline in the *per capita* area sown, as shown below :—

Year	*Population (Millions)*	*Average net * area sown (Million acres)*	*Per capita area sown (acres)*
1911 (Undivided India)	231.6	208	0·70
1921 „ „	233.6	205	0·88
1931 „ „	256.8	211	0·82
1941 „ „	295.8	215	0·72

If we compare the man : land ratio in the Indian Union between 1941-42 and 1947-48, it has dwindled from about 0·75 acres to ·72 acres. The average size of holdings in India has consequently undergone progressive diminution.

The average size of holdings in the different States according to some of the estimates made is as follows :—

States	*Average size of holdings (acres)*
Punjab	10
Bombay	13·26
Hyderabad	12
Uttar Pradesh	2·98 to 3·36
Bengal	4·4
Madras	4·5
Madhya Pradesh	8·5
Assam	About 2 acres (4.8 acres in Darrang District in Assam).
Bihar and Orissa	Between 4 and 5
Bhopal	19 acres.

The holdings are scattered over a wide area, in bits too tiny to permit of efficient cultivation.

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*Average of 5 years with census year as the central one. (Source : Famine Enquiry Commission Report).

ANNEXURE II

TABLE " D "—Items No. 13 and 15

IV. Production and Yield per Acre of Principal Crops in India

(Production in thousand tons unless otherwise indicated yield per acre in lbs.)

Crops	Average for three years ending 1938-39		1945-46		1946-47		1947-48		1948-49†		1949-50†	
	Production	Yield per acre	Production	Yield per acre	Production	Yield per acre	Production	Yield per acre	Production	Yield per acre	Production	Yield per acre
	1	2	3	4	5	6	7	8	9	10	11	12
Rice (*a*)	21,199	809	19,892	722	21,669	750	21,247	739	22,462	701	22,650	694
Wheat	7,277	623	6,134	547	4,971	445	5,570	599	5,595	579	..	..
Jowar	7,209	437	5,539	322	5,295	313	5,971	369	4,792	303	..	..
Bajra	2,700	351	2,855	277	2,716	282	2,813	303	2,178	244	2,603	270
Maize	2,188	683	2,383	619	2,349	606	2,431	640	2,023	549	2,263	592
Ragi	1,791	696	1,229	533	1,480	639	1,455	633	1,445	631	1,438	595
Barley	2,222	755	2,253	713	2,450	768	2,640	781	2,302	669	..	..
Gram	3,862	518	3,837	440	3,599	475	4,503	522	4,563	519	..	..
Sugarcane (*b*)	4,455	3,046	4,552	3,185	4,913	3,119	5,817	3,213	4,993	2,950	4,904	3,017
Sesamum	392	216	354	212	323	194	351	198	295	185	..	..
Groundnut (*c*)	3,145	878	3,466	756	3,588	783	3,411	758	2,896	709	3,399	787
Rape and Mustard	733	385	719	372	792	411	806	391	726	365	..	..
Linseed	428	257	351	242	328	225	431	243	439	254	..	..
Castor seed	114	205	123	193	117	195	118	187	108	175	118	190
Cotton	4,146(*d*)	78	2,167(*d*)	75	2,168(*d*)	73	2,168(*d*)	80	1,864(*d*)	66	..	..
Jute	1,904(*e*)	884	1,459(*e*)	1,029	1,320(*e*)	983	1,658(*e*)	1,017	2,055(*e*)	986	3,117 (*e*)	1,077
Tea	392,354(*f*)	514	504,938(*f*)	662	542,482(*f*)	710	561,740(*f*)	733	560,702(*f*)	731	..	..
Coffee*	35,890	194	47,195	235	37 [illegible]0	187	33,927	171	..	..	..	..
Rubber	31,274(*f*)	246	36,795(*f*)	242	35 201(*f*)	229	32,367(*f*)	209	32,239(*f*)	208	..	..
Tobacco	338	839	331	726	270	716	234	634	232	648	..	..

(*a*) In terms of cleaned rice.
(*b*) In terms of raw sugar (gur).
(*c*) In terms of nuts in shell.
(*d*) In thousand bales of 392 lbs. of lint cotton.
(*e*) In thousand bales of 400 lbs. each.
(*f*) Relate to calendar years and are in thousand lbs.
*Production in thousand lbs.
† Subject to revision.

Note.—(1) The above figures include the estimates for Non-reporting areas in the case of food grains.

Directorate of Economics and Statistics,
Ministry of Agriculture.

ANNEXURE III

TABLE " D "– Item 28

ROUTE MILEAGE OF ALL CLASS I, II AND III RAILWAYS AS ON 31ST MARCH OF :

Year	Single line	Double line	Treble etc. lines	Total
1939				
B.G.	17,733·65	3,291·35	139·61	21,164·61
M.G.	15,798·74	47·63	15·55	15,861·92
N.G.	4,107·20	Nil	Nil	4,107·20
Total	37,639·59	3,338·98	155·16	41,133·73
1946				
B.G.	17,084·62	3,424·98	177·00	20,686·60
M.G.	15,735·90	252·78	15·55	16,004·23
N.G.	3,827·08	Nil	Nil	3,827·08
Total	36,647·60	3,677·76	192·55	40 517·91
1947				
B.G.	17,082·65	3,424·98	177·16	20,684·79
M.G.	15,779·88	217·09	15·55	16,012·52
N.G.	3,826·92	Nil	Nil	3,826·92
Total	36,689·45	3,642·07	192·71	40,524·23
1948*				
B.G.	12,725·75	2,735·33	178·40	15,639·48
M.G.	14,911·67	80·70	15·55	15,007·92
N.G.	3,337·48	Nil	Nil	3,337·48
Total	30,974·90	2,816·03	193·95	33 984·88
1949*				
B.G.	12,701·38	2,813·24	179·70	15,694·32
M.G.	14,675·86	76 20	15·55	14,767 61
N.G.	3,398·92	Nil	Nil	3,398·92
Total	30,773 16	2,889 44	195 25	33,860·85

*Excludes figures of B.A. and N.W. Railways (which are included in the figures of the previous years) due to the partition of the country, but includes E.P. and Assam Railways as formed from 15th August, 1947.

ANNEXURE IV

TABLE "D"—Item 30.

NUMBER OF RAILWAY WAGONS AND THEIR CAPACITY

Year	Railways	Ordinary (Covered and Opens)						Special type including Brakes Vans Number (in Units)*		
		Number (in Units)			Capacity (in Tons)					
		Broad Gauge	Metre Gauge	Narrow Gauge	Broad Gauge	Metre Gauge	Narrow Gauge	Broad Gauge	Metre Gauge	Narrow Gauge
1938-39	Class I	137,203	47,234	*3,587	2,934,499	634,575	*51,773	11,928	5,065	‡
	Class II	Nil	6,493	2,088	Nil	§	§	Nil	188	26
	Class III	Nil	110	1,496	Nil	§	§	Nil	Nil	15
	Total	137,203	53,837	7,171	2,934,499	634,575	51,773	11,928	5,253	41
1945-46	Class I	154,021	45,824	*3,351	3,311,111	616,220	*48,305	13,855	4,736	‡
	Class II	Nil	3,768	2,364	Nil	§	§	Nil	95	35
	Class III	Nil	148	1,456	Nil	§	§	Nil	Nil	18
	Total	154,021	49,740	7,171	3,311,111	616,220	48,305	13,855	4,831	53
1946-47†	Class I	159,902	45,581	*3,347	3,442,250	613,440	*50,276	13,941	4,728	‡
	Class II	Nil	3,725	2,366	Nil	§	§	Nil	95	25
	Class III	Nil	159	1,483	Nil	§	§	Nil	Nil	13
	Total	159,902	49,465	†7,196	3,442,250	613,440	50,276	13,941	4,823	38
1947-48†	Class I	140,390	39,175	*2,795	3,030,418	525,743	*42,090	12,296	4,291	‡
	Class II	Nil	3,703	2,365	Nil	§	§	Nil	101	23
	Class III	Nil	193	1,506	Nil	§	§	Nil	Nil	19
	Total	140,390	43,071	6,666	3,030,418	525,743	42,090	12,296	4,392	42
1948-49	Class I	141,022	38,606	*2,791	3,050,233	519,565	*41,193	12,194	4,250	‡
	Class II	Nil	3,769	2,355	Nil	§	§	Nil	22	19
	Class III	Nil	193	1,490	Nil	§	§	Nil	Nil	21
	Total	141,022	42,568	6,636	3,050,233	519,565	41,193	12,194	4,272	50

* These types have no carrying capacity recorded against them.

‡ Included under "Ordinary wagons".

† Including special types.

§ Not available.

Excludes figures of B.A. and N.W. Railways (which are included in the figures of the previous years) due to partition of the country, but includes E.P. and Assam Railways as formed from 15-8-1947.

Class I Railways are those with an annual gross earnings usually of over Rs. 5 millions.

Class II Railways are those with an annual gross earnings of over Rs. 1 million and up to Rs. 5 millions.

Class III Railways are those with an annual gross earnings usually of under Rs. 1 million.

"KATYAL"

ANNEXURE V

TABLE "D"—Items 41 and 42

PRODUCTION AND CONSUMPTION OF PETROLEUM PRODUCTS

(All figures in thousands of tons)

Products	PRODUCTION						CONSUMPTION					
	1939	1945	1946	1947	1948	1949	1939	1945	1946	1947	1948	1949
Crude Oil	194·8	291·0	266·3	246·9	248·6	251·1	—	—	—	—	—	—
Aviation Spirit	·3	—	—	—	—	—	7·1	1,398·2	80·9	46·7	40·5	48·5
Motor Spirit	59·6	81·2	67·7	56·3	46·2	47·6	341·8	1,098·5	435·1	480 1	456·1	541·4
Kerosene	110·1	44·8	53·5	53·4	40·6	40·8	883·4	559·5	650·5	716·4	555·2	728·9
High Speed Diesel Oil	1·0	44·5	13·5	16·4	23·5	18·4	9·4	149·5	50·6	44·4	64·7	157·4
Diesel Oil	34·4	22·8	33·6	28·6	21·3	22·1	289·3	429·9	379·5	298·0	283·4	346·0
Furnace Oil	2·1	11·6	9·2	·9	·6	—	351·3	1,222·8	979·4	486·1	491·6	549·8
Mineral Turpentine	Not available	2·5	5·1	3·4	7·5	5·2	1·9	7·3	5·5	6·7	6·7	8·7
Solvent Oil	Not available	1·4	2·9	4·7	4·7	3·7	1·1	2·4	3·3	3·9	4·8	5·4
Malarial Oil	Not available	5·4	1·5	1·4	1·3	1·1	2·3	20·6	4·2	3·1	4·5	5·2
Lubricants	Not available	14·1	19·8	20·6	17·9	19·6	Not available	185·6	88·8	41·5	185·4	160·9
Sleeper Oil	Not available	Not available	Not available	Not available	Not available	·2	—	—	—	—	—	—
Aviation, Turbine Fuel	Not available	Not available	Not available	Not available	Not available	·4	—	—	—	—	—	—
Wood Oil	Not available	Not available	Not available	Not available	Not available	·2	—	—	—	—	—	—
Jute Batching Oil	3·0	—	1	4	2	—	77·4	37·0	49·6	56·9	57 1	60 4
Aromex	Not available	Not available	Not available	Not available	Not available	81·1	—	—	—	—	—	—
Vaporising Oil	Not available	Not available	Not available	Not available	Not available	11·1	—	—	—	2·2	10·6	32·5
Road Asphalt	Not available	Not available	Not available	Not available	Not available	2·9	Not available	Not available	Not available	Not available	Not available	54·0
Tea Driver Oil	Not available	Not available	Not available	Not available	Not available	13·3	—	—	—	—	—	—
Finished Wax	Not available	Not available	Not available	Not available	Not available	31·6	Not available	Not available	Not available	Not available	Not available	9·0

APPENDIX V

TABLE "E"

TECHNICAL ASSISTANCE

(Referred in paras. 44, 46 and 50 of the Report)

SUMMARY STATEMENT

	No. of Trainees	*No. of Experts*	*Remarks*
I. TECHNICAL ASSISTANCE REQUIRED			
TABLE I (*with Annexures I and II*) Technical Assistance required for the Six-Year Development Plans :			
(*a*) Central Government Schemes	2,709	421	These totals also include 27 trainees and 25 experts for Scheme Nos. 1, 19 and 32 which have not been finally approved.
(*b*) State Governments Schemes	274	85	
TABLE II (*with Explanatory Notes*) Technical assistance required under the Commonwealth Technical Assistance Scheme.	56	17	In addition to the Schemes in Table II, Scheme Nos. 8, 15, 16, 17, 18, 19, 21, 22, 23, 24, 27, 29, 30, 31, 32, 33 and 35 of Table I (Central Government) have also been sponsored as eligible for assistance under the Commonwealth Technical Assistance Scheme.
TABLE III (*with Explanatory Notes*) Technical assistance through the U.N. Agencies.	71	95	In addition to Schemes in Table III, Scheme Nos. 28, 33, 38, 40 and 45 of Table I (Central Government) have also been sponsored for assistance from the U. N. Agencies.
I. TOTAL ASSISTANCE REQUIRED	3,110	618	
II. ASSISTANCE THAT CAN BE MADE AVAILABLE. TABLE IV	2,691	27	

Note.—Technical Assistance Required : These statements do not cover assistance that may be required in the private sector.

TABLE I

STATEMENT SHOWING TECHNICAL ASSISTANCE REQUIRED FOR THE DEVELOPMENT PROGRAMME OF THE MINISTRIES OF THE GOVERNMENT OF INDIA

Sl. No.	Name of Schemes	Personnel to be sent abroad for training			Technical assistance from abroad, i.e., Experts			Remarks
		No.	Period	Type of training	No.	Period	Type of experts	
1	2	3	4	5	6	7	8	9
	Ministry of Agriculture							
1	Indian Veterinary Research Institute.	—	—	—	1 1	3 years Not known.	To prepare vaccine and sera Animal Husbandry Expert	— To demonstrate artificial insemination technique.
2	Fisheries Research Institute .	—	—	—	2	2 years	Master Fishermen . . .	1 for Trawling ; 1 for Seining.
3	Development of Marine Fisheries	—	—	Will be decided after the scheme has been sanctioned.				
	Ministry of Railways							
4	Extension of the existing power house including provision of two turboalternator sets of 10,000 k. W. each (at Kalyan).	—	—	Number and period of trainees and experts is not given but the work is being done under the guidance of Consulting Engineers, Messrs. Morzand & Mclellian.				
5	Construction of a locomotive manufacturing works at Chittaranjan.	—	—	Number and period of experts and trainees are not given but agreement has been entered into with locomotive manufacturing company, Great Britain.				
	Ministry of Communications							
6	Replacement and expansion of Calcutta Telephone System.	6 6 6	1949-50 1950-51 1951-52	For auto-training . . .	5 6	1950-51 1951-52	For installing auto-exchange .	Services will be required for 5 years.
7	Setting up of factory for manufacture of automatic telephone and carrier equipment.	—	—	Trainees will be sent as and when necessary.	—	—	The experts will be provided by A.T.E. Co., London.	—
8	Works at Aerodromes (II) . .	6	6 months each.	For specialised construction work required in aerodromes.	—	—	—	Experts will not be essential if the training scheme is implemented.
9	Development of Air Transport Services.	—	—	Assistance of aircraft experts may be needed. The number and period has not been indicated at this stage.				
10	Expansion of Aeronautical Research.	—	—	Some officers will have to be sent abroad. Number and period not specified.	1	Not indicated.	Technical Adviser . . .	—
11	Astronomical Development Plan .	2	Not indicated.	—	—	—	—	It is stated that training of one or two officers in Institutions in Europe or America may be

		2	Not indicated.					It is stated that training of one or two officers in Institutions in Europe or America may be necessary.
	Ministry of I. and S.							
13	Aircraft Manufacturing Project at Bangalore.	25	8 per year	For assembling and manufacturing	2	Short period.	Development programme	
14	Fertiliser Project, Sindri . .	—	—	Messrs. Chemical Construction Corporation of U.S.A. and Messrs. Power Gas Corporation of U.K., with whose technical assistance the factory is being built, have already given training to our officers. They will also provide four or five experts when required.				
15	Establishment of a Factory for the Manufacture of Penicillin, Sulpha and anti-Malarial Drugs (II).	1	Not known	Chemist to take charge of production.	1	2 months	For designing and construction of penicillin plant and its initial operation.	
		3	Not known	Assistants to take charge of fermentation, extraction and purification and sterilisation departments.	2	Not indicated.	A chemical engineer and assistant designer for the quick erection and efficient work of the factory.	
		2	Not known	Technologists to study the methods in the laboratories of M/s Kambolaget in Sweden.	—	3 months	For initial operation of the penicillin plant.	
16	Establishment of a Machine-tool Factory in Mysore State (II).	400	4 years (100 each year).	For planning, layout and foundry work.	240	4 years	Swiss experts for training the Indian personnel and technical assistance for running the factory.	
17	Dry Core Telephone Cable Factory (II).	6	12-16 months.	Training in S.T.C.'s work .	2	2 years	1 Chief Engineer ; 1 Works Manager.	
18	Establishment of two Integrated Steel Plants (II).	77	Not known	38 Design Engineers, 12 Construction Engineers; 3 Maintenance Engineers, 3 Procurement Engineers, etc.	—	—	Experts for four years for erection of the plant.	
19	Heavy Electric Power Plant Factory (II).	—	—	—	18	2-3 years	—	Details to be worked out.
20	Rail Coach Project . . .	—	—	—	—	—	—	Ditto
21	Establishment of Independent Aircraft Industry (II).	—	—	—	—	—	—	Ditto
22	Ship-training Industry (II) .	—	—	—	—	—	—	
23	Mathematical Instrument Office, Calcutta (II).	5	1950-51	In the process of manufacture and development of various scientific instruments	2	1950-51	—	Ditto
		5	1951-52		2	1951-52	—	Two German experts have already been recruited.
24	Development of Salt Production (II).	—	—	—	1	3 years	Technical Adviser . . .	—

TABLE I—*contd.*

Sl. No.	Name of Scheme	Personnel to be sent abroad for training			Technical assistance from abroad, i.e. Experts			Remarks
		No.	Period	Type of training	No	Period	Type of experts	
1	2	3	4	5	6	7	8	9
25	Development of Mandi Salt Mines.	—	—	Number of trainees and experts will depend upon the survey report of the Swiss Firms.				
26	Radio Equipment and Radar Factory.	—	—	Indian personnel will be trained in the methods of production, factory management and provisioning. Period of training for Foreman will be 12-18 months; special Tool Makers, 2-3 years, and Design Engineers, 3-3½ years.	50	Not indicated.	(1) Chief of Development. (2) Development Engineers. (3) Chief Engineers for Wireless Equipment, valve, and component divisions. (4) Divisional Engineers. (5) Production Engineers. (6) Designers.	This scheme is to be undertaken either by Messrs. Marconi of U.K. or Messrs. Compagim General De Telegraph Company, France.
27	Establishment of a factory for the manufacture of Industrial Explosives (II).	20	(10 each year) 2 years.	Not indicated	—	—	Technical experts for erection of the factory, for supervision of manufacture and for training of works and other personnel will be required. Number and period not specified.	—
	Ministry of Transport							
28	National Highway Development (III).	100–120	15–20 years (each year)	Advance training in Highway Engineering.	1	3 years	Director of Technical Co-ordination in the Central Roads Organisation.	—
	Ministry of Commerce				2	3 years for each.	Captain Superintendents in the Training Establishments.	—
29	Training Scheme for Merchant Navy Ratings (II).	—	—	—	2	Not known	Senior Lecturers to teach Advanced Marine Engineering.	—
30	Marine Engineering Scheme (II) .	—	—	—				
	Ministry of Education							
31	Establishment of High Technical Institute at Hijli (West Bengal) (II).	27	2 to 3 years	Specialised training	7	5 years	For teaching in Higher Technical institutions.	—
32	Establishment of Western Technical Institute, Bombay (II).	27	2 to 3 years	Special training.	6	5 years	Ditto	—
33	Overseas Scholarships (II) and (III).	800	2 years for each trainee.	Various technical subjects.				The subjects are given in Annexure I to Table I.
	Ministry of W. M. & P.							
34	Hirakud Dam Project	—	—		13		Not known.	

35	*Expansion of Geological Survey of India (II).*	7	2 years each.	2 for Geophysics 1 Economic Geology 1 Engineering Geology 1 Ground Water Hydrology 1 for Drilling	5 3	1st year 3rd year	2 Geophysicists, 2 Geologists. 1 Drilling Engineer. 2 Predrilling Engineers. 1 for Hydraulic Machinery.	
36	Poona Research Station	—	—		5	Not known	1 Research, 1 Hydraulic Machinery, 1 in Photrelasine, 1 in soil, and 1 in Earth Research.	—
37	Multipurpose Development of Damodar-Storage Dams with Hydro-electric Stations, etc.	43	1 year	Please see Annexure II	28	From 1 year to 3 years.	Please see Annexure II	With background of American experience.
	Ministry of Health							
38	To develop the Maternity and Child Health Section of the All-India Institute of Hygiene and Public Health (III).	60	9 months	For maternity and child care	8	2 years	1 Consultant Paediatrician 1 Consultant in Social Medicine. 1 Paediatric Nurse. 3 Instructors in Public Health. 1 Health Director. 1 Administrative Officer.	These will be supplied by U.N.I.C.E.F.
39	Scheme for B.C.G. Vaccination	845	3-4 months (in 6 years).	For B.C.G. vaccination				—
40	Establishment of three Anti-T. B. Centres for Demonstration Training Research (III).	126	3 years (42 each year).	For supervision of mobile and epidemiological work.	8	1 year	For laboratory technicians and epidemiologists.	Will be provided by U.N.I.C.E.F.
41	Expansion of Lady Hardinge Hospital —Provision of 100 more beds.	—			2	1 year	(i) Professor of Pharmacology (ii) Pharmaceutical Chemist.	—
42	Up-grading of Departments of existing Medical Institutions.	30	1 year	Post-graduate training	2	1 year 2 years	1 Physiologist. 1 Psychiatrist. 1 Bacteriologist. 1 Pathologist.	
43	T. B. Institute, Delhi	—	—	—				
44	Establishment of a Medical College at Delhi in association with Irwin Hospital.	50	Not indicated.	For medical training	3	1 year each.	(i) Professor of Physiology (ii) Professor of Pharmacology. (iii) Professor of Pathology.	—
45	Construction of a permanent building for Nursing College, Delhi (III).	—	—	—	4	1 year	Not indicated	To be provided by U.N.I.C.E.F.
	TOTAL	2,709			421			

EXPLANATORY NOTES TO TABLE I

Schemes marked as (II) are to be treated as also included in Table II. Similarly, Schemes marked as (III) are to be treated as included in Table III.

ANNEXURE I

STATEMENT SHOWING THE SUBJECTS IN WHICH OVERSEAS TRAINED PERSONNEL ARE REQUIRED BY THE GOVERNMENT OF INDIA

Subject :—

(1) Low Temperature Physics.
(2) Modern Techniques in Laboratory Testing and Wind tunnel research.
(3) Ultra Short Wave and Micro Engineering, etc.
(4) Electron Microscope.
(5) Teaching research in applied science with particular reference to chemical engineering and technology.
(6) Highway Engineering.
(7) Advanced Hydraulics.
(8) Advanced Structures.
(9) Municipal and Sanitary Engineering.
(10) Production Engineering.
(11) Machine Tools.
(12) Town and Regional Planning.
(13) Chemical Plant Design and Manufacturing Engineering Economics.
(14) Geophysics.
(15) Mechanical Engineering.
(16) Electrical Engineering.
(17) Chemical Technology application of Chemical Engineering principles of rate process.
(18) Soil Mechanics.
(19) Head Engines (Gas turbines and jet engines).
(20) Radiology.
(21) Design of towers of extra high tension transmission lines and their manufacture.
(22) Hydro-electric Generator.
(23) Civil Engineering— Bridge design and construction.
(24) Geological Engineering.
(25) Manufacturing and Machine parts.
(26) Palæo-botany.
(27) Research and study of teaching methods in design and performance of electrical machines.
(28) Radio Physics and Electronics with particular reference to Microwave technique.
(29) Advanced studies on X-Ray/Spectroscopy of metals and alloys and solids of Technical and Theoretical importance.
(30) Naval Engineering.
(31) Road Equipments, Maintenance, operation and administration.
(32) Investigation Design and Construction of Dams.
(33) Theoretical and practical training for one year in multi-purpose projects and working of modern earth cutting machinery.
(34) Leather Chemistry, Manufacture with emphasis :—
  (1) Chemistry of hide proteins.
  (2) Chemistry of vegetable tannings.
  (3) Chemistry of hide synthetic tanstuffs
  (4) Chemistry of hide tanning salts.
(35) Physic-therapy.
(36) Physic-therapy instructor's course.
(37) Special training in anti-tuberculosis work.
(38) Psychiatry.
(39) Pharmaceology.
(40) Ophthalmology.
(41) Cytology and Genetics.
(42) Study in up-to-date methods of maternity and child welfare.
(43) Dentistry.
(44) Industrial and business administration.
(45) Training in production of educational films.
(46) Training in modern trends and patents, study of murals.
(47) Commercial Art.
(48) Research of theory of machine.
(49) Scientific Management, Industrial Research and Business Administration.
(50) Study of Welfare and rehabilitation work of the Blind.
(51) Social Sciences—Specialisation in Criminology, Penal Administration.
(52) Educational Psychology of Abnormal and Mentally Deficient Children.
(53) Study of Museology and Museography.

ANNEXURE II

TRAINING

Type of Training	*Number of trainees*	*Period of training*	*Remarks*
I. Erection and maintenance of modern high pressure thermal plant.	10	1 year	Now undergoing training in U. S. A.
Ditto	7	1 year	Due to be sent to U. S. A. in 1950-51.
II. Power Transmission System	2 Assistant Engineers.	1 year	Manufacture, assembly of parts testing, operation and maintenance :
			132 KV transformers of 10,000 to 20 000 KVA capacity in U.K.
Ditto	2 Assistant Engineers, 2 Foremen	1 year	Ditto
			132 KV oil circuit breakers in U.K. and Switzerland.
Ditto	1 Assistant Engineer	6 months	Ditto
			33 KV oil circuit breakers in U.K.
Ditto	2 Assistant Engineers	6 months	Ditto
			control relaying and metering equipment in U.K. and U.S.A.
III. Project Planning (Dams) .	2	6 months	Preferably in U.S.A.
IV. Designs (Dams) . .	1	1 year	Now under training in Switzerland.
Ditto . .	3	1 year	Preferably in U.S.A.
V. Hydrolong . . .	1	1 year	..
VI. Engineering geology . .	1	1 year	..
VII. Soil Mechanics . .	1	6 months	..
VIII. Malarial Engineering .	1	6 months	..
IX. Construction Engineering .	2	1 year	..
X. Mechanical Engineering for heavy construction equipment :			
(*a*) Operation . .	1	1 year	..
(*b*) Repair and maintenance	1	1 year	..
XI. Agricultural engineering .	1	6 months	
XII. Soil conservation. .	2	6 months	Preferably in U.S.A.

EXPERTS

Type of experts	*Number required*	*Period for which required*	*Remarks, if any*
I. Water Planning engineer .	1	2 years	
II. Dam design engineer . .	2	2 years	1 for earth and 1 for concrete.
III. Civil Construction engineer	1	3 years	With background of American experience.
IV. Mechanical engineers for heavy construction equipment :			
(*a*) Operation . .	1	2 years	..
(*b*) Repair and maintenance	1	2 years	..
V. Malarial engineer . .	1	1 year	..
Thermal Power Station			
Construction engineers, civil, mechanical, electrical .	2	3 years	Services either have been, or will be, obtained from U.S.A. under terms of existing contract.
Ditto . .	3	2 years	
Erectors for boilers, turbines, switchgear, piping, wiring, etc.	9	2 years	
Ditto . .	3	1 year	
Transmission System			
Foreman	1	1 year	Services obtained from Italy for 132 KV line heavy conductor stringing work with mechanised erection appliances.
Assistant Foreman . .	1	6 months	Ditto.
Erection engineers . . .	2	1 year	From Japan for the erection of hydro-turbine and generator sets with control equipment already ordered.

STATES GOVERNMENTS

STATEMENT SHOWING TECHNCIAL ASSISTANCE REQUIRED FOR THE SIX-YEARS' DEVELOPMENT PROGRAMME—1951—57 OF THE STATE GOVERNMENTS

Sl. No.	Name of Scheme	Personnel to be sent abroad for training			Technical assistance from abroad, i.e. Experts			Remarks
		No.	Period	Type of training	No.	Period	Type of experts	
1	2	3	4	5	6	7	8	9
				Agriculture				
	Government of Bombay							
1	Deputation of officers for training abroad in Agriculture and allied subjects.	14	2 years in each case.	Advance training in Agriculture and allied subjects.	14	—	—	—
2	Eradication of Hriali and bringing fallow land under plough.	2	6 months	Deputation to Australia or U.S.A. for a study tour.	—	—	—	—
	Government of Uttar Pradesh							
3	Power cultivation, including reclamation, harrowing and Patela work.	—	—	Two courses—one in Workshop Practice and the other in Service Engineering.	—	—	—	—
4	Research institute at Roorkee .	1	—	Trainee	—	—	—	—
				Co-operation				
	Government of Assam							
1	"The Co-operative Societies Scheme".	—	—	—	2	—	One for banking business and one for insurance business.	—
	Government of West Bengal							
2	Organization of Silk Reelers' co-operatives.	1	—	The Deputy Director of Sericulture will proceed to Japan to study the Silk Industry there under the Central Silk Board's Scheme.	—	—	—	—
	Government of Madras							
3	Establishment of Co-operative workshops for ex-servicemen.	—	—	—	1	—	An Engineer capable of administering an Engineering Workshop with special training in Sheet Metal Works and manufacture of Woodwork.	—

	Government of West Bengal			*Fisheries*				
1	Scheme for the sea-fishing with the help of two power crafts to be obtained from Denmark.	—	—	—	N.A.	3 months	Danish experts for the work	
	Government of Bombay			*Milk Supply to Towns*				
1	Five year milk plan styled as the Bombay Milk Plan.	—	—	—	2	—	One expert from U.K. and the other from Denmark have been requested to advise the State Government in connection with the survey of milk potentialities in Anand area. Their advice on setting up and selection of dairy machinery at Anand and cold storage in Bombay is to be sought.	
	Government of Bombay			*Irrigation and Multi-purpose Projects*				
1	Koyna Hydro-Electric Project .	2 2	—	Class I Officers . . . . . Class II Officers	2	—	One for Electrical and Mechanical Part: one for Civil Engineering Part.	
2	Ghataprabha Left Bank Canal Project.	—				—	Expert advice required in connection with foundation of Dams sited in quartzite rock area.	
3	Gangapur Storage Project . .	—				—	Experts such as Consulting Engineers will be required occasionally once in six months or a year.	
4	Vir Dam Project . . .	—				—	Consulting Engineers required on annual honorarium.	
	Government of Madras							
5	Krishna-Penner Project . .	6	1 year	Training in U.S.A. . . .	3	1 year	Consultants (tentatively) . .	
	Government of Hyderabad							
6	Tungabhadra Hydro-Electric Project.	4	18 months	Two trainees for the design of Generating Plant and transmission lines; and two trainees for the erection and maintenance of Generating Plant and transmission lines.	2	2½ years	One expert for lay out and detail design, and one expert on erection of Generating Plant.	
	Government of Assam			*Power Project*				
1	The Umtrú Hydro-Electric Project.	10	2 years	Training in Electrical and Mechanical Engineering in England and United States of America.	1 1	3 years	One for Dam Construction and one for Erection of Power Station.	Six trainees have already returned and three awaiting appointment.

Sl. No.	Name of Scheme	Personnel to be sent abroad for training			Technical assistance from abroad, i.e. Experts			Remarks
		No.	Period	Type of training	No.	Period	Type of experts	
1	2	3	4	5	6	7	8	9
	Government of Madras			*Power Project—contd.*				
2	Machkund Hydro-Electric Scheme	—	—	—	2	18 months	Two American Erectors for turbines and generators.	—
3	Madras Power Station Extension — Scheme.	—	—	—	1	—	Consulting Engineers are required in respect of the first stage extensions.	—
	Government of Orissa							
4	Duduma Transmission Scheme .	—	—	For erection and operation of high-tension transmission system, training of Engineers from the State in the foreign system is necessary.	—	—	—	—
5	Hirakud Distribution Scheme .	—	—	Technical assistance for design and manufacture of high-tension transmission towers and lines and substation is required, and for this training of Engineers from State is necessary.	—	—	—	—
	Government of Uttar Pradesh							
6	Kanpur Electricity Supply Administration.	—	—	—	1	Permanent	A Chief Engineer with experience of major thermal public utility under-takings is required.	—
	Government of Hyderabad							
7	Azainabad Thermal Power Scheme	—	—	—	—	—	Erectors of Metropolitan Vickers will be called to erect the three 12,500 k.w. sets. They will remain till the sets are put into commission.	—
8	Nizamsagar Hydro-Electric Scheme	1	2 years	One officer for training in United States of America and Canada.	1	—	One adviser is appointed . .	—
	Government of Travancore and Cochin							
9	Sengulam Hydro-Electric Project	2	—	It is desired to depute two senior Engineers of the Department for training in the work of M S. English Electric Company.	2	—	Experts for inspection and testing of the plant.	—

10	*Pallivasal Hydro-Electric Project*	1	1 year	One Executive Engineer has been deputed for training in Bureau of Reclamation from America.	—	—	It is desired to hire the services of a Grouting expert from the Bureau of Reclamation from America.	—
	Government of Assam							
1	Sericulture and Weaving Scheme	3	2 years	Training in Sericulture	N.A.	N.A.	Experts who could organise Sericulture Industry on modern lines and instruct in reeling in filatures.	—
	Government of Madhya Pradesh							
2	Natural Newsprint and Paper Mills Ltd.			Details being worked out			Details being worked out	—
3	Ballarpur Mills Project	3	N.A.	Training in various branches of paper making.	6	N.A.	Constructional and Operational personnel.	—
	Government of Uttar Pradesh							
4	Cement Factory	Nil	Nil	Nil	4	2 years	For erection of the factory.	—
5	Precision Instruments Factory	Nil	Nil	Nil	N.A.	2 years	Technicians who would take charge of the manufacturing processes.	—
	Government of Mysore							
6	Electric Pig Iron Furnace Scheme—Furnace Proper.			(Under consideration)	4	6 months	One Chief Erector, one Assistant to Chief Erector, two Engineers to start furnaces.	—
7	Electric Pig Iron Scheme—Improvement of Mines and Tramways	Nil	Nil	Nil	1	—	One Erector	—
8	Expansion of Cement Plant	Nil	Nil	Nil	1	3 months	One Burner	—
9	Expansion of Steel Making Capacity—Bessener Electric Duplex Plant.	3	6 months	—	2	6 months	One Erector after July 1951 and one Operator after July 1952.	—
10	Expansion of Steel Making Capacity—Billet and Light Structural Mill.	4	6 months to 1 year	—	4	1 year	Two expert Erectors for about a year in 1951 and two Operators in 1952 for about six months.	—
11	Alloy and Steel Tool Plant	2	6 months	—	2	1 year	One Erector for about three months and one Operator for about one year.	—
12	Wire and Wire Products Mill	3	1 year	—	3	6 months	One Erector for about six months and two Operators for about a year.	—
13	Tube Mill	4	18 months	—	3	1 year	One expert Erector; one Engineer for six months; one Operator for about a year (1952-53).	—
14	Stainless Steel Plant and Shirt Mill	3	18 months	—	6	—	Two expert Erectors during 1952-53; one Engineer and three Operators for a period of one year.	—

Sl. No.	Name of Scheme	Personnel to be sent abroad for training			Technical assistance from abroad, *i.e.*, Experts			Remarks
		No.	Period	Type of training	No.	Period	Type of experts	
1	2	3	4	5	6	7	8	9
				Power Project —contd.				
15	Chemical Fertiliser Factory .	2	2 years	One Chemical Engineer ; one Mechanical Engineer.	4	1 year	One Chief Erector ; two Erectors ; one Operating Chemical Engineer.	—
16	Raw Film Industry . . .	4	1 to 2 years.	One Mechanical Engineer, three Chemical Engineers.	5*	1 to 2 years	One Chief Erector ; two Erectors for a period of eighteen months ; two Operating Chemical Engineers for a period of two years.	—
17	Expansion of the Government Silk Weaving Factory.	1	—	Training in Silk Industry. .	—	—	—	—
18	Manufacture of High Tension Insulators.	4	1 year	—	3	2 years	—	—
19	Remodelling the Government Central Industrial Workshop.	1	—	Training in modern foundry and workshop.	—	—	—	—
20	Modernisation of Soap Manufacture in the State.	1	1 year	—	—	—	—	

STATEMENT SHOWING TECHNICAL ASSISTANCE REQUIRED FOR THE SIX YEARS' DEVELOPMENT PROGRAMME 1951–57 OF THE STATE GOVERNMENTS

Sl. No	Name of Scheme	Personnel to be sent abroad for training			Technical assistance from abroad, i.e., Experts			Remarks
		No.	Period	Type of training	No.	Period	Type of experts	
1	2	3	4	5	6	7	8	9
	Government of Orissa			***Medical***				
1	Improvement of Shri Ram Chandra Bhanja Medical College and the teaching Hospital attached to it.	—	—	Technical assistance is required in as much as professional staff of the Shri Ram Chandra Bhanja Medical College and of the attached Hospital are required to be deputed to obtain higher post-graduate training in their respective [illegible].	—	—	—	—
	Delhi Administration							
2	Provincialisation and expansion of Victoria Zanana Hospital by addition of 30 beds.	20 10	— —	Nursing . . . . Midwifery	— —	— —	— —	— —
3	Expansion of Lady Hardinge Medical College and Hospital	80 60	— —	Medical Training . . . and Nursing	1 1	— —	Prof. of Pathology . . . Pharmaceutical Chemist . .	— —
4	T. B. Institute at Delhi . .	20	1 year	Bacteriology and Pathology .	—	—	—	—

TABLE II

STATEMENT SHOWING TECHNICAL ASSISTANCE (REQUIRED FOR OTHER SCHEMES) NOT INDICATED IN TABLE "A" UNDER THE COMMONWEALTH TECHNICAL ASSISTANCE SCHEME

Sl. No.	Name of Scheme	Personnel to be sent abroad for training			Technical assistance from abroad, *i.e.*, Experts			Remarks
		No.	Period	Type of training	No.	Period	Type of experts	
1	2	3	4	5	6	7	8	9
				Ministry of Communications				
1	Posts and Telegraphs Department	4	Sufficient to be fully conversant with the work.	Maintenance of Teleprinters .	1	Not indicated.	To set up and maintain the teleprinter system.	Both the training as well as the lending of expert would be done by the B.P.O. and the Creed & Co., Ltd., London.

TABLE II—*contd.*

STATEMENT SHOWING TECHNICAL ASSISTANCE (REQUIRED FOR OTHER SCHEMES) NOT INDICATED IN TABLE "A" UNDER THE COMMONWEALTH TECHNICAL ASSISTANCE SCHEME—*contd*—

Sl. No.	Name of Scheme	Personnel to be sent abroad for training			Technical assistance from abroad, i.e., Experts			Remarks
		No.	Period	Type of training	No.	Period	Type of experts	
1	2	3	4	5	6	7	8	9
2	Posts and Telegraphs Department	6	Sufficient to undergo complete training.	To be trained in telecommunication manufacturing workshops.	—	—	—	There will be six Officers like Assistant Engineers to be trained in England.
				Ministry of Works, Mines and Power				
3	Central Waterpower, Irrigation and Navigation Commission.	6	1-2 years	Training on large hydro-electric projects and construction of Dams.	—	—	—	The six Engineers are to be trained in England, Canada and Australia.
4	Central Electricity Commission .	8	1 year	Specialised training in design of large thermal power stations.	—	—	—	—
5	Ditto	12	1 year	Specialised training in construction and operation of large thermal power stations.	—	—	—	Out of a period of twelve months training, they should spend nine months in construction and three months on the operation of large power stations.
6	Ditto	18	1 year	Specialised training in design, construction and Operation of High Voltage transmission system.	—	—	—	Trainees should spend six months on construction, three months on operation, and three months on design of high voltage transmission system (trainees must have an Engineering Degree and experience of not less than five years).

7	Indian School of Mines and applied geology.	2	1-2 years	Research and Post graduate training in mining and geological survey in colleges or industrial concerns.					
				Ministry of Health					
8	Public Health Teachers for College of Nursing.	—	—	—	3	—	To impart training in the College of Nursing.	—	
9	Thoracic Surgeon . . .	—	—	—	1	1 year	Not indicated	—	
10	Anaesthetist	—	—	—	1	1 year	ditto	—	
11	Cardiologist	—	—	—	1	1 year	ditto	Required for the Post graduate centre, Irwin Hospital, Delhi.	
12	Chest Specialist . . .	—	—	—	1	1 year	—	—	
13	Orthopaedic Surgeon . . .	—	—	—	1	1 year	Not indicated	—	
14	Physiotherapist . . .	—	—	—	1	1 year	ditto	—	
15	Prosthetic Technician. . .	—	—	—	1	1 year	ditto	—	
16	Physiologist	—	—	—	1	1 year	ditto	—	
17	Biochemist	—	—	—	1	1 year	ditto	—	
18	Pharmocologist	—	—	—	1	1 year	ditto	—	
19	Pharmaceutical Chemist . .	—	—	—	1	1 year	ditto	—	
20	Psychiatrist	—	—	—	1	1 year	ditto	—	
21	Bacteriologist (T.B.) . . .	—	—	—	1	1 year	ditto	—	
	Total .	56			17				

Explanatory Notes to Table II

In addition to the scheme in Table II, Scheme Nos. 8, 15, 16, 17, 18, 19, 21, 22, 23, 24, 27, 29, 30, 31, 32, 33 and 35 of Table I have also been approved as eligible for assistance under the Commonwealth Technical Assistance Scheme.

TABLE III

STATEMENT SHOWING TECHNICAL ASSISTANCE TO BE SOUGHT THROUGH THE U. N. AGENCIES, I.E.(POINT 4 PROGRAMME, ETC.) FOR SCHEMES NOT INDICATED IN TABLES A AND B

Sl. No.	Name of Schemes	Personnel to be sent abroad for training			Technical assistance from abroad, i.e., Experts			Remarks
		No.	Period	Type of training	No.	Period	Type of experts	
1	2	3	4	5	6	7	8	9
	Ministry of Health							
1	Malaria Control demonstration .	—	—	—	2 teams	—	For Malaria control . . .	Due to W.H.O. "freeze" action, no assistance is expected to be available.
2	Maternal and Child Health .	—	—	—	1 team	—	For Child Welfare . . .	ditto
3	Venereal Diseases . . .	—	—	—	1 team	—	For Venereal diseases . .	ditto
4	Cholera	—	—	—	4	—	For control of Cholera . .	ditto
	Ministry of Agriculture							
5	Demonstrator and Adviser on Chemical control.	—	—	—	4	—	For pests and diseases of paddy, etc.	Two Senior and two Junior officers are required for demonstration.
6	Tractor Management . . .	6	—	—	1	—	For Tractor Management . .	The proposal is to bring expert from U.S.A.
7	Mycology	—	—	—	1	—	For advising only . . .	Adviser of the Organisation of Research in Indian Agriculture Research Institute.
8	Entomology	—	—	—	1	—	ditto	ditto
9	Other Agricultural Institutes .	2	—	—	2	—	Adviser for Research Work .	—
10	Topographical Survey . .	2	—	—	—	—	—	—
11	Organisation of the Grading of Wool.	—	—	—	1	—	For organising marketing of wool.	—
12	Engineering in the Forest Research Institute.	—	—	—	1	—	—	—
13	Cellulose Expert . . .	—	—	—	1	—	To advise on organisation on paper and cellulose branch of the Forest Research Institute.	—

15	Saw-mill Engineer	—	—	—	1	—	To advise in organising Research on lesser known timber for plywood.	—
16	Food packing experts	—	—	—	1	—	To advise on the erection of machines imported.	—
17	Tobacco auction Organiser	—	—	—	1	—	To adivse on food packing	—
18	Grading of hides and skins	—	—	—	1	—	To advise on Tobacco auction	—
19	Artificial insemination	—	—	—	1	—	To advise on grading of hides and skins.	—
20	Fisheries	—	—	—	½	—	To demonstrate the latest technique.	—
				—	23	2*	To demonstrate how the fishery resources of India could be tapped.	Three experts, eight skippers and twelve crew.
21	Soil conservation demonstrator and agriculture demonstration work.	—	—	—	1	—	To advise on the organisation	—
22	Agriculture and Economics and Statistics.	—	—	—	2	—	To study latest improvement in statistics and give training in crop survey and cotton insurance.	—
23	Technician to advise organisation pertaining survey and plant pests and diseases.	—	—	—	2	—	To advise on plant pests and diseases.	—
24	Indian Fluid products preservation.	—	—	—	1	—	For preservation of food products.	—
25	Mechanic to demonstrate sieving manure.	—	—	—	½	—	To demonstrate sieving manure	—
	Ministry of Transport							
26	Deputy Director of technical co-ordination.	—	—	—	1	—	To advise Government on setting road test track.	—
27	Training of Road Engineer already employed by the Government.	21	2 years	—	—	—	—	Nine Engineers to be trained in 1950 and twelve in 1951.
	Ministry of W.M. & P.							
28	Multipurpose river valley products	—	—	—	2	—	One Master Mechanic: one Master Electrician.	Experts should have vast experience and worked in responsible position.
29	Research	—	—	—	6	1 to 3 years	To advise design and supervise the construction and operation of multipurpose projects.	One specialist in power house design, one in earth dam, one in navigation research one in soil research etc.

*17 crew, 1 expert, 4 skippers will work as Pay of Pengal Unit for one year and 18 crew, 2 experts, and 4 skippers will be a unit in Arabian Sea for another year.

TABLE III—*continued.*

Sl. No.	Name of Schemes	Personnel to be sent abroad for training			Technical assistance from abroad, i.e. Experts			Remarks
		No.	Period	Type of training	No.	Period	Type of experts	
1	2	3	4	4	6	7	8	9
30	Central Electricity Commission .	—	—	—	1	3 years	To make development project studies.	This man will be Chief Engineer, electricity system.
31	Steam Power Station . .	—	—	—	1	3 years	For mechanical and fuel technology.	Fifteen years' experience in design construction.
	UTTAR PRADESH							
32	Mechanical Engineering . .	—	—	—	1	2 years	Mechanical Foreman Engineer .	Maintenance and operation of heavy construction machinery.
33	Concrete Engineering . .	—	—	—	1	2 years	Concrete Engineer . . .	For concrete manufacturing plant lay out.
34	Construction Engineering . .	—	—	—	2	2 years	Construction Engineer . .	For construction of large concrete dam for Rihand and Ram Ganga projects.
35	Design Manufacture and erection of transmission line, tower (ORISSA).	—	—	—	1	2 years	For design, manufacture and erection of transmission line tower for utilisation of power from MachKund and Hirakud.	—
36	Grouting of dam foundation (TRAVANCORE and COCHIN).	—	—	—	1	6 months	—	—
	BOMBAY							
37	Hydrology	—	—	—	1	2 years	Hydrology Engineer in connection of Koyna Hydro-electric scheme	—
38	Hydraulic Engineering . .	—	—	—	1	2 years	ditto	—
39	Project Engineering . .	—	—	—	1	2 years	ditto	—

41	*Ministry of Labour* Fellowships training scheme .	4	—	Technical and Vocational Training	—	—	—	—	Two in U.K. and two in Japan.
42	Ditto	2	—	For Employment Exchange organisation.	—	—	—	—	Two in U.K.
43	Ditto	6 (each) year)	5 years	Latest technique in mining .	—	—	—	—	Trainees will be sent to U.K.
44	Social Security Administration .	8	6 months	(i) Central administration. (ii) Administration of benefits, etc.	—	—	—	—	The cost will be borne by I.L.O.
45	Fellowship	6	—	Labour Relation Administration .	—	—	—	—	Three trainees to U.K and three to U.S.A.
46	Ditto	4	—	Trade Union Organisation . .	—	—	—	—	Two trainees to U.K. and two to U.S.A.
47	Ditto	4	6 months	Wages and productivity of Labour	—	—	—	—	Trainees to be sent to U.K.
48	Ditto	2	6 months	Minimum wages legislation .	—	—	—	—	One trainee to U.K. and one to U.S.A.
49	Ditto	4	8 months	Labour Inspection . . .	—	—	—	—	Six months in U.K. and in U.S.A.
	Ministry of Education								
50	Establishment of a Bibliographical Centre.	—	—	—	5	Not indicated.	One Chief Documentatist ; Two Documentatists ; Two Abstractors.		For all the schemes Nos. 50—58 assistance has been asked from UNESCO. In this connection the name of Prof. Turner Alfrey of the Brooklyn Polytechnic has been suggested.
51	National Chemical Laboratory of India.	—	—	—	1	ditto	To inaugurate the Division of Plastics and high Polymers.		
52	National Physical Laboratory of India.	—	—	—	3	ditto	One Assistant Director Two Scientific Officers.		—
53	Research Laboratory of Central Water Power Irrigation and Navigation Commission.	—	—	—	4	ditto	One, for Hydraulic Machinery ; One, Concrete Research ; One, Photoelastic Studies ; and One, Navigation Research.		—
54	Central Institute of Education, India.	—	—	—	—	—	Experts on vocational Guidance and Child psychology required.		Number and period not specified.
55	Rural Social Education Scheme .	—	—	—	—	—	Audio Visual experts are required		ditto
56	The Birbal Sohni Institute of Palaeobotany.	—	—	—	1	ditto	One Director		—
57	Indian Association for the cultivation of Science, Calcutta.	—	—	—	2	ditto	One for High Polymerphysics ; One for High Polymerchemistry.		—
58	Bose Research Institute . .	—	—	—	1	ditto	In ultra contrifugo . . .		—

EXPLANATORY NOTES TO TABLE III

In addition to schemes in Table III, scheme Nos. 28, 33, 38, 40 and 45 of Table I have also been sponsored for technical assistance from the U.N. agencies.

(2) **Assistance under Point Four (4) Programme** : This includes scheme Nos. 5 to 34 of Table III ; and No. 28 of Table I.

(3) **Assistance from W.H.O.:**—This includes scheme Nos. 1 to 4 of Table III. However, due to W.H.O. "freeze action", no assistance is expected to be available.

(4) **Assistance by U.N.I.C.E.F.** : —This includes the scheme Nos. 38, 40 and 45 of Table I. Besides this, we have also asked for aid as detailed below :—

	$
(*a*) Fellowship Programmes . .	60,000
(*b*) Development of Training in Maternity and Child health.	3,62,000
(*c*) Poliomyelitis control programme ..	86,400
(*d*) Maternity and Child Welfare services.	60,000
(*e*) Paediatric training centres . .	17,000
(*f*) Venereal Diseases . .	57,000
(*g*) Tuberculosis . . .	1,28,000
(*h*) Child Care training centre . .	9,30,000

No reply has been received about the allotment of any aid in this connection so far.

(5) **Assistance under U.N.E.S.C.O. :**—This includes scheme Nos. 50 to 58 of Table III and No. 33 of Table I. For the last named scheme, "Overseas Scholarship" out of a total proposed number of 800, assistance from U.N.E.S.C.O has been asked only for 50 scholarships.

(6) **Assistance from I.L.O. :**—This includes scheme No. 44 of Table III.

(7) **Scheme Nos. 41-43 ; 45-49 of Table III :**—For these schemes, the U.N. Agency from which assistance is sought is not indicated.

8. The Ministry of Communications have applied for Technical Assistance from the U.N. Organisation in respect of Fellowship and Scholarships in (*a*) Telegraph Systems ; (*b*) Telephone Systems ; and (*c*) Radio Communication Systems. However the chances of such technical assistance becoming available are very meagre.

(9) The Ministry of Railways have applied for a few scholarships offered by the U.N.O. for the subjects of Signal Engineering ; Electrical Engineering ; Architecture and Town Planning, Government Accounting Technique, Statistics and Production Engineering.

STATEMENT IV

TECHNICAL ASSISTANCE THAT CAN BE MADE AVAILABLE BY INDIA

(a) **Training of personnel**

It would be possible to provide about :—

Education Institutions

125 seats in all degree courses in engineering and technological subjects ;
150 seats in all diploma courses in engineering and technological subjects ;
25 seats for post-graduate study and research leading to the degree of Master of Science;
250 seats for courses leading to B.Sc. degree ;
100 seats for courses leading to Masters degree in Arts ;
1,000 seats for courses leading to Bachelors degree in Arts.

Communications

80 seats for importing practical training in the installation and maintenance of communication equipments ;
16 seats for training for Radio Operators and Technicians ;
10 seats for junior Air Line Pilots ;
3 seats in weather forecasting and meteorological training ;
4 seats for training in long distance communications by cable and radio.

Transport

50 seats in advanced practical training in Highway Engineering.

Medical and Public Health

56 Seats for Medical and Public Health Courses.

Industries

6 seats in various branches of manufacture of Iron and Steel ;
4 seats in branches of general Engineering ;
2 seats in manufacture of Cotton Textiles ;
2 seats in manufacture of Chemicals ;
4 seats in manufacture of crockery and Electric Insulators ;
10 seats in various Research Laboratories.

Commerce

15 seats for training cadets for careers.

Works, Mines and Power

18 seats for training in designs, construction and maintenance of Irrigation Systems ;
25 seats for construction and operation of Indian Electric Power System ;
2 seats for Mining Engineering and Geology ;
10 seats for practical training in building construction.

Agriculture

6 seats for training in practices of Indian Fisheries ;
10 seats for diploma and certificate in Agricultural Statistics ;
5 seats for intermediate examination of Institute of Surveyors ;
1 seat in advanced study in Geodesy ;
4 seats in practical course in Dairy Development ;
3 seats for Post Graduate course in Agricultural subjects ;
19 seats for course in Veterinary ;
6 seats for training in Indian Forest Research Institute.

Railways

100 seats for practical training in Civil, Electric and Mechanical Engineering in Railway Workshops.

Labour

512 seats for training as Artisans and Craftsmen ;
26 seats for training as Craftsmen and Instructors ;
20 seats for training as Employment Officers ;
8 seats for training as Factory Inspectors ;
2 seats for training in methods of Labour Research ;
2 seats for training in inspection of Mines.

2,691

Total number of personnel for whom training can be provided . . 2,691

(b) Provision of experts

The following experts can be made available—

2 Instructors in Radio Communications for a period of two to three years ;
2 Junior Pilot Instructors for a period of two to three years ;
3 Officers for Planning of Meteorological Operations ;
4 Engineers for Planning and installation of equipment for international communications ;
12 Experts for problems connected with design, construction and maintenance of Irrigation Systems ;
2 Experts for Technical Training ;
2 Experts for collection, etc., of Labour Intelligence ;
2 Experts for Employment Service Organisation ;
1 Expert for collection, etc., of Labour Intelligence Statistics ;
– Some Retired Executive Engineers.
– Some Retired Railway Civil and Mechanical Engineers.

27

Total number of Experts or Specialists who could be made available .. 27

(c) Provision of equipmint

No details in regard to this could be given till the personnel required is settled.

W.M.P. are, however, prepared to permit the experts to take with them minor equipment.

(d) Establishment, equipment, extension or endowment of Institutions

Not in a position to offer to any appreciable extent.

W.M.P. have suggested that a few engineers of repute could be spared for expansion of institutions dealing with design, construction, etc., of irrigation and other systems.

APPENDIX VI

A Note on the Estimate of Investment in the Private Sector

The current rate of net private investment has been estimated to be roughly of the order of Rs. 1,600 million per annum. (This was done separately in a research study by the Reserve Bank). This, however, does not represent the amount of investment which is desirable in the next six years. Taking *Agriculture* where the current rate of investment was assumed to be nil, we have to note that nearly 9·1 million acres of land are likely to come under irrigation in the next six years and roughly 3 million acres under cultivation under schemes of land reclamation in the same period. Assuming the cost at roughly Rs. 100 per acre for land to come under irrigation anew, and Rs. 200 per acre roughly to represent the cost of bringing under cultivation hitherto uncultivated land, the total cost of these two items would roughly be Rs. 1,500 million. To this may be added Rs. 1,000 million which we may assume to be investment in respect of land improvement, better methods of cultivation, etc. Thus, the rate per annum would roughly be Rs. 400 million. In the sector of *mining* in the ensuing period, the cost of schemes to develop iron ore, bauxite, petroleum, manganese, mica, etc., may be taken at Rs. 40 million per annum. Under manufacturing industry, the total amount of desirable investment would probably be in the neighbourhood of Rs. 250 million per annum. The total of fresh investment in the trade sector may be put broadly at Rs. 400 million, while for transport, the figure would be Rs. 100 million. With regard to the housing sector, apart from current rate of Rs. 1,000 million it may be that we will have to have additional investment amounting roughly to Rs. 350 million. Thus as against the current rate of net investment of nearly Rs. 1,600 million, we find that the desirable rate of investment would be nearly Rs. 2,550 million.

For this additional investment, the necessary resources, it is expected, will grow as the plan proceeds and incomes are generated. The following estimates indicate the measure of additional savings likely to be available to the private sector. The known sources of finance namely (*a*) the net increase in life assurance funds and reserve funds of other joint stock companies ; (*b*) the annual rise of savings deposits in banks ; and (*c*) the probable rise of the working capital of co-operative societies per annum is expected to total to roughly Rs. 300 million. To this may be added the figure of Rs. 350 million per annum to represent private savings estimated to flow into industry. This assumes, of course, that the capital markets would be restored to normalcy and the figure itself is based more or less on the pre-war rate of investment as indicated by the annual rate of increase in the paid-up capital of joint stock companies. It

may also be expected that about Rs. 150 million should be available to meet the investment requirements from out of rural savings to mobilise which attempts are now being made. With the widespread encouragement now being given to rural banking and other facilities to tap this source of savings the figure does not appear to be unreasonable. We may also expect about Rs. 50 million per annum to flow into manufacturing industries and if permitted, also into certain mining sectors from private foreign investors. Thus the gap between the desirable investment of Rs. 2,500 million and the current rate of investment of Rs. 1,600 million would be narrowed by roughly Rs. 200 million leaving a gap of only about Rs. 100 million which could either be filled by Government out of its revenue by foreign aid. If further investment through private foreign capital is to be expected conditions would have to be facilitated in this country to make such investment possible. This it is presumed will be done.

In making the estimates for the current rate of net investment the desirable rate of investment and the gap between the two cannot be over emphasised and the inherent limitations of this method are not overlooked. The figures of even the current rate of investment are at best rough and approximate. Moreover, as stated earlier, if the amount of domestic savings likely to take place is to be utilised for the purpose of financing investment, the most important assumption is that the capital markets would be restored to normalcy. Should this assumption prove unrealistic then it is likely that the gap between the desirable investment and the investment likely to be financed out of domestic resources would be wider. The facts described above are illustrated in the form of a table below.

TABLE I

(Rupees in million)

	Current rate of investment	*Desirable rate of investment*
Agriculture (including rural industries)	Nil	400
Mining	13	40
Manufacturing Industry	200	250
Housing	1,000	1,350
Trade	33	400
Transport and others	50	100
Total	1,593 *or say* 1,600	2,540 *or say* 2,550
Gap		950

TABLE II

Expected Sources of Finance

"Known" Sources	300
Capital Markets and Company Reserves	350
Rural Savings	150
Private foreign investment	50
"Gap" in the private sector	100
Total	950

APPENDIX VII

SCHEDULE TO TABLE B OF THE QUESTIONNAIRE

INDEX

STATEMENT	I (*a*)	Agriculture	(Schemes in progress)	V (*a*)	Industry	(Schemes in progress)
	(*b*)	Agriculture	(New Schemes)	(*b*)	Industry	(New Schemes)
	II (*a*)	Transport	(Schemes in progress)	VI (*a*)	Social Capital	(Schemes in progress)
	(*b*)	Transport	(New Schemes)	(*b*)	Social Capital	(New Schemes)
	III (*a*)	Fuel and Power	(Schemes in progress)			
	(*b*)	Fuel and Power	(New Schemes)			

EXPLANATORY NOTES TO APPENDIX VII

The *pro-forma* of the attached statements does not correspond to that prescribed in the Questionnaire since for most of the investment contemplated, the source of Finance is the revenue of the Government at the Centre or the States. Expenditure break-down are given to the extent they are available.

SCHEDULE TO TABLE B

I (*a*) AGRICULTURE—SCHEMES IN PROGRESS

(In millions of rupees)

Sl. No.	Authority undertaking project	Brief description of project	Date to be begun	Date of completion	Total cost up to March 1951	Cost 1951-57 (six years)			Remarks
						Total	External		
							Hard currencies	Soft currencies	
1	2	3	4	5	6	7	8	9	10
1	*Government of India* (Ministry of Agriculture).	Integrated crop production plan including Central Tractor Organization.	1947	1957	69·1	1,322·6	52·4	28·3	
2	ditto	Agricultural Research	1949	1957	8·0	12·5	—	—	
3	ditto	Animal Husbandry Research	1950	1956	·4	2·4	—	—	
4	ditto	Tube-Wells scheme	1950	1952-53	37·1	86·0	35·7	21·0	
5	ditto	Andamans Forest Development	1945	1953	4·2	11·3	—	2·0	
6	ditto	Fisheries Research	1947	Continuous scheme (1957)	4·0	10·7	—	·5	

7	*Government of India (Ministry of Works, Mines and Power)*	*Major Irrigation Projects* Ferozepur Canals (Harike)	1949	1954	26.8	111·0	7·2	4·5	Figures of cost relate to the period 1951-57 and do not include the entire cost of the projects.
		Multi-purpose Projects							
8	ditto	Bhakra-Nangal Project	1948	1957-58	166·0	757·2	90·0	60·0	
9	ditto	Damodar Valley Corporation	1948	1956-57	126·2	500·0	90·0	70·0	
10	ditto	Hirakud Project	1948	1955-56	78·7	300·0	20·0	75·0	
11	ditto	Investigations by CWINC	1945	1957	11·0	21·1	·2	·1	
12	ditto	Poona Research Institute	1947-48	1952-53	6	1·7	·1	·2	
13	*Government of Bihar*	Construction of minor Arhars, Pynes and bunds—G.M.F. Scheme.	1949-50	1952	—	34·02	—	—	
14	ditto	Surface percolation wells	1949-50	1952	—	12·60	—	—	
15	ditto	Open borings	1949-50	1952	—	5·00	—	—	
16	ditto	Installation of tube-wells 2 machine rigs for boring wells and the construction of 210 wells.	1949-50	1952	—	4·20	—	—	
17	ditto	Lift irrigation	1949-50	1952	—	16·0	—	—	
18	ditto	Irrigation and drainage of chaures schemes.	1949-50	1952	—	10·50	—	—	
19	ditto	Drainage and tube-wells irrigation (300 tube-wells—Sugar factories areas).	1950-51	—	9 0	17·20	—	—	
20	ditto	Scheme for development of Sugar cane cultivation in Bihar.	1947	1957	2 0	4·0	—	—	
21	ditto	Intensification of Sugar cane research	1947	1957	2·20	2·80	—	—	
22	*Government of Bombay*	Scheme for the establishment of Agriculture Schools—One in each district—to impart practical training in Agriculture to the sons of the cultivators.	1947	1952	5·0	2·80	—	—	
23	ditto	Scheme for procurement and distribution of groundnut cakes.	1943	1957	19·2	2·7	—	—	
24	ditto	Scheme for construction of new wells and improvement of existing ones.	1944	1952	38·5	33·8	—	—	
25	ditto	Extension of potato cultivation. (To import seed potatoes from the Simla hills for cultivation in the Province as seed potatoes cannot be produced in the State without fear of contamination with plant viruses).	1947	1952	22·6	11·1	—	—	
26	ditto	Conservation of moisture and checking of soil erosion.	1947	1952	7·9	2·5	—	—	
27	ditto	*Hariali* eradication and reclamation of cultivable waste land.	1950	1952	4 0	4·1	2·7		

1 (*a*) AGRICULTURE—SCHEMES IN PROGRESS—*contd.*

(In millions of rupees)

Sl. No.	Authority undertaking project	Brief description of project	Date to be begun	Date of completion	Total cost up to March 1951	Cost 1951-57 (six years)			Remarks
						Total	External		
							Hard currencies	Soft currencies	
1	2	3	4	5	6	7	8	9	10
28	*Government of Punjab* .	Jagadhari Tube-wells . . .	1949	1952	5·4	5·3	2·0		
29	*Government of Uttar Pradesh* .	Field extension service on the model of that existing in the United States of America.	1948	1957 (Continuing scheme)	2·8	7·4	—	—	
30	ditto	Establishment of a central, three Zonal and ten rural agricultural workshops for designing and manufacture of improved agricultural implements and parts, repair and servicing of tractors, etc.	1948	1957 (Continuing scheme)	6 0	11·6	—	—	
31	ditto	Scheme for multiplication of pedigree seed through registered growers and th ir distribution through the basic seed stores.	1949	1957 (Continuing scheme)	3·8	12·3	—	—	
32	ditto	Two hundred additional tube-wells—construction of	1950	1953	2 0	5·1	2·5		
33	ditto	Mechanical farms project . .	1948	1953	4·0	5·0	—	—	
34	ditto	Provincial Tractor Organization .	1947	—	20·0	22·4	—	—	
35	*Government of Madras* .	Distribution of phosphatic manures to increase paddy production.	1949	1952	6·2	3·1	—	—	
36	ditto	Oil engines pump sets—purchase of and distribution to *ryots* on hire basis.	1948	1952	2·7	2·9	—	—	
37	ditto	Tractor cultivation scheme . .	1947	1954	12·1	15·6	3·6	·3	
38	ditto	Scheme for the establishment of Central Agricultural Engineering Stores and Supply Centre for distribution of pump sets on hire-purchase system.	1949	1953	5·0	4·7	—	—	

39	" ditto	An over all plan for carrying out improvement to irrigation tanks, etc.	1949	1954	11·0	88·9	—	—	
40	*Government of West Bengal* .	Employment of extension staff in connection with food production schemes.	—	—	3·0	3·4	—	—	
41	ditto	Re-excavation of derelict irrigation tanks.	1946	9153	8·0	4·0	—	—	
42	ditto	Minor irrigation schemes . .	1947	—	·6	2·8	—	—	
43	ditto	Minor irrigation and drainage scheme.	1946	1953	6·0	8·8	—	—	
44	ditto	Distribution of oil-cakes . .	1946	—	2·1	4·6	—	—	
45	*Government of Mysore* .	Provision of implements for agricultural purposes.	1949	1952	3·9	2·9	—	—	
46	ditto	Supply of oil cakes, ammonium sulphate, bonemeal, etc.	1949	1952	10·6	12·9	—	—	
47	ditto	Minor irrigation—Purchase and distribution of diesel engines, electrical pumping sets and persian wheels.	1949	1952	3 5	5·8	—	—	
48	*Government of Travancore and Cochin.*	Lift irrigation scheme . . .	1945	—	5·0	2·5	—	—	
49	ditto	Minor irrigation—The construction and renovation of all minor irrigation works.	1948	1953	10·0	10·0	—	—	
50	*Government of Bhopal* .	Scheme for construction of tanks, wells, barrages on rivers and channels.	1951	1954	·8	2·7	—	—	
		Veterinary							
51	*Government of Madhya Pradesh*	Veterinary College and Livestock Research Institute.	1947	1952	·8	3·6	—	—	
52	ditto	Training of Stock supervisors and stockmen-cum-health assistants.	1946	—	·3	2·7	—	—	
53	ditto	Expansion of Veterinary animal husbandry organization.	—	—	·7	12·8	—	—	
54	ditto	Establishment of dairy units in big towns.	—	—	1·0	7·9	—	—	
55	ditto	Concentration camps for cattle .	1950	1955	99·0	84·0	—	—	
		Veterinary							
56	*Government of Uttar Pradesh* .	Veterinary College and livestock station, Mathura.	1947	—	2·0	3·3	—	—	
		Veterinary							
57	*Government of Madhya Bharat* .	Extension of veterinary facilities —opening of dispensaries.	1949	1962	·2	2·8*	—	—	*Up to 1951-57 only.

(In millions of rupees)

Sl. No.	Authority undertaking project	Brief description of project	Date to be begun	Date of completion	Total cost up to March 1951	Cost 1951-57 (six years)			Remarks
						Total	External		
							Hard currencies	Soft currencies	
1	2	3	4	5	6	7	8	9	10
		Co-operation							
58	*Government of Assam*	Co-operative Societies Scheme—opening of a number of co-operative societies to raise the living standard of the people through better business, better methods of production, equitable distribution and exchange.	1948	1953	13·3	14·4	—	—	
59	*Government of Bombay*	Sarvodaya Scheme—Items of development are (1) Education, (2) Agricultural improvement, (3) Cottage industries, and (4) Health Water Supply and communications, (5) Social and Cultural development including Prohibition.	1949	1953	3·4	6·6	—	—	
60	ditto	Bombay *Agricultural* debtors' relief scheme.	1945	1957	2·5	3·5	—	—	
61	ditto	Integrated rural credit scheme to provide credit to agriculturists at a reasonable rate of interest for agricultural purposes.	1949	1957	1·5	2·8	—	—	
62	ditto	Administration of Bombay Lenders Act.	1947	—	2·0	2·9	—	—	
		Forests							
63	*Government of Uttar Pradesh*	Land management—renovation of old groves, creation of roadside avenues and planting up of railway lands, etc.	1945	1957	5·0	5·3	—	—	
64	*Government of West Bengal*	Afforestration of waste lands through state agency.	1947	1952	1·5	4·0	—	—	

65	*Government of Bihar* .	Management of Bihar forests under the Bihar Private Forests Act.	1947	1952	1·4	9·1	—	—	
		Rural Development							
66	*Government of Assam* .	Rural development project—village up lift, creation of modern facilities, provision of hospitals, etc.	1947	1963	2·9	57·3	—	—	For 16 years.
		Milk Supply to Towns							
67	*Government of Madhya Pradesh* .	Establishment of dairy units in big towns for supply of milk.	1946	1954	2·0	6·9	—	—	
68	*Government of Bombay* .	Bombay Milk Plan for improvement of the supply of Bombay State.	1947	1953	25·2	19·8	—	1·0	
69	*Government of Assam* . .	Establishment of dairy farms .	—	—	·1	2·3	—	—	
		Major Irrigation Projects							
70	*Government of Bihar* . .	Gandak Valley Project . .	1949	1954	23·7	156·3	N.A.		
71	*Government of Bombay* . .	Ghatar Prabha left bank Canal Project.	1949	1954	10·0	45·0	—	—	
72	ditto	Gangapur Dam Project . .	1948	1954	12·1	21·2	3·6		
73	ditto	Vir Dam Project	1950	1958	3·5	35·0	6·4		
74	ditto	Mahe Canal Project . . .	1949	1953	6·7	35·8	—	—	
75	*Government of Madras* .	Lower Bhavani Project . .	1948	1954	31·0	51·0	5·6		
76	ditto	Malampuzha Project . . .	1949	1954	7·4	30·6	4·2		
77	ditto	Canal from Mettur Reservoir .	1949	1954	7·0	17·5	5·5		
78	ditto	Romperu Drainage scheme . .	1946	1953	6·5	4·2	1·2		
79	ditto	Rallapad Project	1948	1953	1·1	4·7	·7		
80	*Government of Uttar Pradesh* .	Sarda Canal Extension by 10,62 miles.	1948	1952	3·0	12·0	—		
81	ditto	Sarda Canal Extension in V circle .	1949	1954	1·5	17·9	4·4		
82	ditto	Belan Canal Project . . .	1949-50	1953-54	2·2	7·7	—		
83	ditto	Ramgaum Reservoir and Trans Baghin Canal.	1950	1953	1·6	5·8	—		
84	ditto	Partapgarh Branch . . .	1949	1951	1·3	4·2	—		
85	*Government of West Bengal* .	13 irrigation and drainage schemes .	1946	1951-52	2·9	8·8	—		
		Major Irrigation Projects							
86	*Government of Hyderabad* .	Godavari North Canal Project .	1949	1955	15·1	77·7	25·9		
87	ditto	Rajoli Bunda Diversion Scheme .	1947	1954	16 6	33·6	11·2		
88	*Government of Mysore* . .	Tunga Anicut Works . . .	1946	1953	3·7	16·3	—		
89	ditto	Nugu Reservoir Works . .	1947	1955	1·8	15·2	—		

I (*a*) Agriculture—Schemes in Progress—*contd.*

(In millions of rupees)

Sl. No.	Authority undertaking project	Brief description of project	Date to be begun	Date of completion	Total cost up to March 1951	Cost 1951-57 (six years)			Remarks
						Total	External		
							Hard currencies	Soft currencies	
1	2	3	4	5	6	7	8	9	10
90	*Government of Saurashtra*	Machhu Irrigation Scheme	1949	1952	2·5	4·3	—		
91	ditto	Prahmin Irrigation Scheme	1949	1952	2·4	4·8	—		
92	ditto	Sasahi Irrigation Scheme	1945	1952	2·6	3·3	—		
93	*Government of Travancore-Cochin*	Peechi Irrigation Scheme	1948	1953	7·7	7·2	2		
94	ditto	Chalakūdi Irrigation Scheme	1949	1953	2·1	10·0	—		
95	ditto	Kodayar Extension Scheme	1945	1951	6·0	4·5	—		
96	*Government of Kutch*	Provision for Schemes not reported	—	—	—	10·0	—		
		Multi-purpose Projects.							
97	*Government of Bombay*	Kakarpara Project	1949	1954	17·6	94·0	—	—	
98	ditto	Radhanagri Hydel Project	1939	1952	12·8	8·0	—	—	
99	*Government of Madras*	Tungabhadra Project	1949	1953	95·3	154·2	35·3		
100	*Government of West Bengal*	Mayurakshi (Mor) Reservoir Project	1946	1954	35·0	80·0	3·6		
101	*Government of Hyderabad*	Tungabhadra Project	1945	1953	81·6	165·6	47·7		
102	*Government of Madhya Bharat*	Chambal Project	1948	1955	56·5	153·5	45·0		Includes Rajasthan's share also.
103	*Government of Mysore*	Lakkayalli Project	1947	1960	4·6	30·0	—	—	Out of total cost of 1,800,300 has been provided.
104	*Government of Rajasthan*	Jawai River Hydel Scheme	—	—	15·5	12·0	—	—	

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I (*b*) Agriculture—New Schemes

		Fisheries.						
1	*Government of India* (Ministry of Agriculture).	Development on Marine Fisheries	To be completed in 18 months after commencement	—	61·4	10·6	6·8	

2	*Government of Bihar* . .	To set up a tractor reclamation unit —1,000 acres of land.	1950	1952	—	3·3	—	—		
3	ditto	Improvement of communi ations in Sugar factory areas to facilitate movement of raw material.	1950	—	—	3·5	—	—		
4	*Government of Uttar Pradesh*	Sewage utilisation scheme . .	—	—	—	7·2	—	—		
5	ditto .	440 Tubewells in Shahjehanpur, Sitapur, Fyzabad, Gonda and Shaharanpur Districts.	1950	—	16·1	6·9	6·9			
6	ditto	400 Tubewells in the neighbourhood of Manipur.	1950	—	—	8·2	1·8			
7	*Government of Hyderabad*	Land reclamation by tractor ploughing.	1950	—	—	2·8	—	—	Date of completion not fixed yet.	
8	dttto	Kinnersani Project, Warrangal .	—	1958	—	6·5	—	—	Date of commencement not yet decided upon.	
9	ditto	Ashna Project, Nanded . . .	—	1960	—	5·2	—	—		
10	ditto	Nalla Vagu Project, Nizamabad	—	1960	—	2·5	—	—		
11	*Government of Saurashtra* .	Distributon of manures and fertilisers at subsidised rates.	1950	1951	—	2·8	—	—		
12	ditto	Construction of wells . . .	—	—	—	20·0	—	—	Dates to be determined.	
13	*Government of Ajmer* . .	Scheme for maximising food production in Ajmer—reclamation of land by mechanical cultivation.	—	—	—	7·2	—	—		
		Co-operation								
14	*Government of West Bengal* .	Establishment and development of multi-purpose Co-operative Societies.	—	—	—	32·1	—	—	Dates to be determined.	
15	*Government of Hyderabad* .	Creation of a bank for Co-operatives	—	—	—	10·0	—	—		
		Forests								
16	*Government of Madras* . .	Control of private forests to ensure economy, preservation and better management.	1951	—	—	6·0	—	—		
17	*Government of Madhya Pradesh*	Control and management of private forests.	—	—	—	2·5	—	—	Date to be determined	
18	*Government of Travancore and Cochin.*	Construction of roads—Development of forests—at Shenkottah and Quillon Divisions.	1951	—	—	2·9	—	—	Date of completion not decided upon.	
19	ditto	Construction of roads, development of forests at Konnani.	1951	—	—	2·9	—	—		

I (*b*) AGRICULTURE—NEW SCHEMES—*contd.*

(In millions of rupees)

Sl. No.	Authority undertaking project	Brief description of project	Date to be begun	Date of completion	Total cost up to March 1951	Cost 1951-57 (six years)			Remarks
						Total	External		
							Hard currencies	Soft currencies	
1	2	3	4	5	6	7	8	9	10
		Rural Development							
20	*Government of Madhya Pradesh*	General rural development through Co-operatives.	—	—	—	18·9	—	—	Dates to be decided upon.
		Major Irrigation Projects							
21	*Government of Madras* . .	Provision for new Irrigation and Power schemes.	—	—	—	50·0	—	—	
22	*Government of Rajasthan* . .	Rajasthan Canals . . .	—	—	—	50·0	—	—	
23	*Government of Travancore and Cochin.*	Provision for new Schemes . .	—	—	—	7·0	—	—	Date to be decided upon.
		Multi purpose Projects.							
24	*Government of Bihar* . .	Kosi Barrage State I . . .	1950-51	1955-56	16·1	69·9	24·0		
25	*Government of Madhya Pradesh*	Upper Mahanadi Project . .	—	—	—	10·0	—	—	Date to be decided upon.
26	*Government of Madras* . .	Ramapadasagar Project. . . or Krishnapennar Project . .	1951	1957	—	50·0	15·0		
27	*Government of Bombay* . .	Koyna Hydro-electric Project .	1950	1964	—	100·0	20·0		

II (*a*) TRANSPORT—SCHEMES IN PROGRESS

		Railways.							
1	*Government of India (Ministry of Railways).*	Development Programme . .	—	—	—	4,800·0*	—	—	*Lump sum provision.
		Roads.							
1	*Government of Bihar*	Construction of Roads . . .	1947-48	1951-52	36·7	67·0	—	—	

2	*Government of Bombay* . .	Ahmedabad—Kalol—Mehsana—Sidhpur Road.	1945	1958	0·2	4·8	—	—	
3	ditto	20 roads in Amreli District . .	1948	—	0·2	4·1	—	—	
4	ditto	Improvement of existing roads and Construction of new ones.	1946	1955	1·7	13·5	—	—	
5	ditto	Deccan Irrigation Circle . .	1948	—	1·1	6·9	—	—	
6	ditto	Dhamdanka—Baswala—Muldhari—Gogho Road, North Gujrat.	1949	1955	0·1	3·3	—	—	
7	ditto	Ahmedabad—Ghondal—Porbander Road.	1949	1955	0·1	3·4	—	—	
8	ditto	7 Road Projects in Kaira District .	1948	1954	0·9	3·1	—	—	
9	ditto	Bandra Borvili Road . . .	1949	1954	0·1	7·5	—	—	
10	ditto	State Road Transport Corporation .	1947	1957	36·7	217·0	—	—	
11	*Government of Madras* . .	Nationalisation of Bus Transport Stage I.	1947	—	7·6	6·0	4·0		
12	*Government of Orissa* . .	State Transport Service . .	1948	1954	1·3	3·9	—	—	
13	*Government of Punjab* . .	Jullundur—Hoshiarpur Dharmsala Road.	1948	1954	0·6	4·8	—	—	
14	*Government of Uttar Pradesh* .	Moradabad Road	1948	1954	0·3	2·6	—	—	
15	ditto	Bareilly—Pilibhit Road . .	1946	—	8·4	4·2	—	—	
16	ditto	Allahabad—Banda Road . .	1946	—	4·4	6·3	—	—	
17	ditto	Additional Road Programme . .	1946	—	25·9	25·0	—	—	
18	ditto	Reconstruction of Local Roads .	1946	—	22·3	5·1	—	—	
19	ditto	Construction of Un-Metalled and Village Roads.	1946	—	16·5	13·1	—	—	
20	*Government of West Bengal* .	Development of Provincial Roads (first priority).	1948	1953	20·6	9·2	—	—	
21	ditto	Development of Provincial Roads (other than first priority).	1947	1953	89·7	43·8	—	—	
22	*Government of Mysore* . .	Government Monopoly of Bus Services.	1949	—	2·7	N.A.	—	—	
23	*Government of Bhopal* . .	Programme of New Road Construction.	April 1948	1959	0·2	14·4	—	—	
		Ports and Harbours							
24	*Government of India* (Ministry of Transport).	Kandla Port	1949	1954	16·5	66·0	—	—	
		Communications							
25	*Government of India* (Ministry of Communication).	Air Transport	—	—	—	200·0	—	—	Lump sum.
26	ditto	Posts and Telegraphs . . .	—	—	—	540·0	—	—	Lump sum.

II (*a*) Transport—Schemes in Progress—*contd.*

(In millions of rupees)

Sl. No.	Authority undertaking project	Brief description of project.	Date to be begun	Date of completion	Total cost up to March 1951	Cost 1951-57 (six years)			Remarks
						Total	External		
							Hard currencies	Soft currencies	
1	2	3	4	5	6	7	8	9	10
		Broadcasting							
27	*Government of India* (Ministry of Information and Broadcasting).	Broadcasting Scheme . . .	—	—	—	50·0	—	—	Lump sum.

II (*b*) Transport—New Schemes

		Roads.							
1	*Government of India* (Ministry of Transport).	Roads (including bridges) . .	—	—	—	300·0	—	—	
2	*Government of Bihar* . .	State Motor Transport . . .	—	—	—	7·0	—	—	
3	*Government of Bombay* . .	Pali—Balasinor—Virpar—Lamroda Road.	1952	1956	—	8·2	—	—	
4	ditto	Six Major Bridge Works under P.W.R. Schemes.	1950	1955	—	3·1	—	—	
5	ditto	Khed—Palmia—Possnia Road .	1951	1956	—	2·6	—	—	
6	ditto	Himalnagar—Sambalpur—Meghraj Road.	1951	—	—	5·9	—	—	
7	ditto	Ider—Bhiloda—Sarhingani Road .	1951	1958	—	4·7	—	—	
8	ditto	Ider—Vizianagar Road . . .	1951	1958	—	4·3	—	—	
9	ditto	Radhanpur—Sarnihangi Road .	1951	1959	—	5·6	—	—	
10	ditto	Deesa—Palampur—Saduwara Road	1951	1959	—	5·9	—	—	
11	ditto	Radhanpur—Warchi—Santhalpur Road.	1951	1959	—	6·5	—	—	
12	ditto	Radhanpur—Balihar—Deodhar—Siro—hi—Deesa Road.	1951	1958	—	6·1	—	—	
13	ditto	Deesa—Asodhar etc. Road . .	1951	1958	—	10·3	—	—	

14	*Government of Bombay*	Taloda—Nandur—Barghari etc. Road.	1950	1958	—	3·0	—	—		
15	ditto	Bridge at Surangkheda across the Tapti.	—	—	—	3·0	—	—		
16	ditto	Karwar—Hubli etc. Road in Sholapur.	1951	1955	—	5·6	—	—		
17	ditto	Nationalisation of Bus Transport and Tramways.	—	—	—	6·2	4·0	—		
18	ditto	Constructing bridges across Godawari	—	1958	0·2	12·2	—	—		
19	ditto	Constructing a bridge across Krishna near Pezwada.	—	1955	0·1	7·5	—	—		
20	ditto	Colenoor Perambalur—Mansa—Madura Road.	—	—	—	2·8	—	—		
21	ditto	Constructing a bridge over Vaseshta	—	—	—	5·2	—	—		
22	*Government of P.E.P.S.U.*	Sunam—Bhiki—Mansa—Talwandi—Sabo Road.	—	—	—	2·9	—	—	—	
23	ditto	Barnala—Bhatinda—Malsur Road	—	—	—	3·2	—	—	—	
24	*Government of Saurashtra*	Moderaising Roads	1950	1960	—	56·1	—	—		
25	ditto	Improvement of Major District Roads.	1950	1960	—	68·6	—	—		
26	ditto	Opening of new Roads	1950	1960	—	28.3	—	—		
27	ditto	Village Roads	—	—	—	14·0	—	—		
28	*Government of Ajmer*	Construction of 700 miles of Kutcha Roads.	—	—	—	3·0	—	—		
29	ditto	Rail Road Co-ordination	—	—	—	3·2	—	—		
30	*Government of Tripura*	Development of Internal Communications System of Tripura.	—	—	—	12·5	—	—		
		Ports and Harbours.								
31	*Government of India* (Ministry of Transport).	Ports other than Kandla	—	—	—	34·0	—	—		
32	*Government of Saurashtra*	Development of Sika Port	—	—	—	25·0	—	—		
33	ditto	Development of Bhavanagar Port	—	—	—	5·0	—	—		
		Communications								
34	*Government of India* (Ministry of Communications).	Overseas Communications	—	—	—	20·0	—	—	Lump Sum Provision.	
35	ditto	Meteorological Department	—	—	—	7·5	—	—	Lump Sum Provision.	

Schedule to Table B

III (*a*) FUEL AND POWER—SCHEMES IN PROGRESS.

1	*Government of Bombay*	North Gujerat Electric Grid	1947	1952	13·6	11·5	7·4		
2	ditto	South Gujerat Electric Grid	1946	1953	16·2	14·0	—	4·0	

Schedule to Table B—*contd.*

III (*a*) FUEL AND POWER—SCHEMES IN PROGRESS—*contd.*

Sl. No.	Authority undertaking project.	Brief description of project.	Date to be begun	Date of completion	Total cost up to March 1951	Cost 1951-57 (six years)			Remarks
						Total	External		
							Hard currencies	Soft currencies	
1	2	3	4	5	6	7	8	9	10
3	*Government of Madhya Pradesh*	Electric Schemes of Madhya Pradesh	1945	1953	88·5	37·8	6·9	4·0	
4	*Government of Madras* . .	Machkund Hydro-electric Scheme .	1946	1953	28·1	103·9	30·0		
5	ditto	Moyar Hydel Scheme . . .	1945	1951	27·2	19·2	2·2		
6	ditto	Pykara Extension III and Final Stage.	1946	1953	13·0	35·9	4·2		
7	ditto	Madhurai Thermal Scheme . .	1946	1951	6·2	7·0	1·6		
8	ditto	Madras Power Station Extension .	1948	1951	18·1	44·0	—		
9	ditto	Madras Mettur Inter-connection Scheme.	1945	1952	5·8	16·0	—		
10	ditto	Nellore Thermal Scheme . .	1948	1950	4·8	5·3	—		
11	ditto	Erode Tiruchirapalli Dalmiapuram Extension.	1947	1951	1·3	2·8	—		
12	ditto	Madhurai Tenkasi Extension . .	1948	1952	1·1	4·4	—		
13	*Government of Orissa* . .	Duduma Transmission Scheme . .	1948	1953	1·2	18.8	11.8		
14	ditto	Hirakud Distribution . . .	1949	1955	1·0	13.8	7.6		
15	*Government of Punjab* . .	Panipat Thermal Electric Supply Project	1949-50	1951-52	2·2	5·7	—		
16	*Government of Uttar Pradesh* .	Sharda Power House . . .	1945	1954	25·9	86·2	28.0		
17	ditto	Kanpur Electricity Supply Administration.	1947	1953	46·3	8·8	5.7		
18	ditto	Pathri Power House . . .	1948-49	1953-54	5·6	24·0	10.0		
19	*Government of West Bengal* .	North Calcutta Rural Electrification Scheme.	1946	1958	5·5	4·2	.8		
20	*Government of Hyderabad* .	Azamabad Thermal Power Scheme	1949	1951	27·5	7·6	—		
21	ditto	New Steam Power House . .	1949	1953	7·7	4·4	—		
22	*Government of Mysore* . .	Mahatma Gandhi Power Hydro-electric Works.	1937-38	1953-54	63·8	19·4	—		

23	ditto	Construction of Transmission lines between Bangalore and Bhadravati.	—	—	7·0	2·4	—		
24	*Government of Rajasthan* . .	Jodhpur Steam Station . . .	1949	1953	2·5	2·5	—		
25	*Government of Travancore and Cochin*	Sengulam Hydel Project . .	1947	1953	15·0	11·9	8.0		
26	ditto	Pallivasal Hydel II Stage . .	1944	1953	9·5	10·5	—		
27	ditto	Poringal Kuthu Hydel Scheme .	1946	1953	14·0	11·0	5.5		

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III (*b*) Fuel and Power—New Schemes

1	*Government of Assam* . .	The Umtru Hydro-electric Projects. Power : 2,750 K.W.	1951	1954	—	11.3	2.5	
2	*Government of P.E.P.S.U.* .	Supply of Hydro-electric energy to towns.	1951	1956	—	3.2	1.0	

V (*a*) Industry—Schemes in Progress

1	*Government of India* (Ministry of Industry and Supply).	Sindri Fertiliser Factory . .	1947	1951	210.0	10.0	—	—	
2	ditto	Expansion of Scop 's Steel Plant .	1947	1953	35.0	33.0	—	—	
3	ditto	Modernisation and Expansion of Tata's Steel Plant.	1950	1957	—	100.0	—	—	
4	ditto	Expansion of Mysore Steel Plant .	1947	1954	6.3	45.2	—	—	
5	ditto	Penicillin Factory . . .	1948	1952	8.0	26.8	—	—	
6	ditto	Machine Tool Factory . . .	1949	1954	24.0	70·6	—	—	
7	ditto	Dry Core Cable Factory . .	1947	1952	1.1	9.5	—	—	
8	ditto	Railcoach Project . . .	1950	1954	2.0	38.1	—	—	
9	ditto	Aircraft Manufacturing Project .	1951	1956	—	140.7	—	—	
10	ditto	Mathematical Instruments Office .	—	1956	0.7	25.7	—	—	
11	*Government of Bihar* . .	State Superphosphate Factory .	1949-50	1952-53	N.A.	3.9	1·6	0.6	
12	ditto	Establishment of a Mechanical and Electrical Engineering College.	—	—	—	3.2	0·2		
13	*Government of Madhya Pradesh*	The National Newsprint and Paper Mills Ltd.	1948	1952	18.5*	6.4	—	—	*Hard currency : $4.15 millions ; soft currency : Rs. 3·6 millions.

V (*a*) INDUSTRY—SCHEMES IN PROGRESS—*contd.*

(In millions of rupees)

Sl. No.	Authority undertaking project	Brief description of project.	Date to be begun	Date of completion	Total cost up to March 1951	Cost 1951-57 (six years)			Remarks
						Total	External		
							Hard currencies	Soft currencies	
1	2	3	4	5	6	7	8	9	10
14	*Government of Madras* . .	Establishment of eight Polytechnics	1946	1953	7·6	5·5	—	—	
15	ditto	Establishment of a Hydrogenation Factory.	—	—	1·4	10·0	—	—	
16	*Government of Punjab* . .	Grant of Bonus under State Aid to Industries Act.	—	—	Negligible	4·6	—	—	
17	*Government of Uttar Pradesh* .	Establishment of a Cement Factory	—	—	9·5	6·2	—	—	
18	*Government of Assam* . .	Sericulture and Weaving . .	1946	1957	3·8	4·6	—	—	
19	ditto	Cottage Industries . . .	1947	1957	3·1	4·7	—	—	
20	*Government of Uttar Pradesh* .	Tuitional Classes Scheme . .	1947	*	1·4	6·8	—	—	*Continuous Scheme.
21	ditto	Development of Khadi Industry .	1947	N.A.	0·4	2·6	—	—	

V (*f*) INDUSTRY—NEW SCHEMES

1	*Government of India* (Ministry of Industry and Supply).	One Integrated Steel Plant . .	—	1955	—	600·0	—	—	
2	ditto	Heavy Electrical Plant Factory .	—	1960	—	284·0	—	—	
3	ditto	Radio Equipment and Radar Factory.	1952	1958	—	81·2	—	—	
4	ditto	Development of Salt Production in Government Mines.	1947	1957	—	6·1	—	—	
5	ditto	Development of Mandi Salt Mines .	—	—	—	10·0	—	—	
6	ditto	Silver Refinery	—	—	—	6·0	—	—	
7	*Government of Madhya Pradesh*	Aluminium Project at Kurba .	—	—	—	40·0	—	—	
8	*Government of Madras* . .	Establishment of six Industrial Schools.	—	—	—	4·1	—	—	

9	*Government of Punjab* . .	Development of Industries by means of Demonstration Units and Social Partnership with Private Enterprise.	—	—	—	8·6	—	—	
10	*Government of Mysore* . .	Alloy and Steel Tool Plant . .	—	—	—	2·5	—	1·8	
11	ditto	Mysore Iron and Steel Works (Expansion Scheme A).	—	—	—	4·5	3·0	0·5	
12	ditto	Mysore Iron and Steel Works (Expansion Scheme B).	—	—	—	8·5	6·0	1·0	
13	ditto	Wire and Wire Products Mill . .	—	—	—	2·5	—	1·8	
14	ditto	Tube Mills	—	—	—	5·0	—	3·5	
15	ditto	Stainless Steel and Sheet Mills	—	—	—	10·0	8·0	—	
16	ditto	Establishment of a Chemical Fertilizer Factory.	—	—	—	30·0	8·7	10·9	
17	ditto	Shimoga Sugar Company .	—	—	—	6·5	—	1·5	
18	ditto	Raw Film Industry	—	—	—	20·0	9·0	3·0	
19	ditto	Factory for Manufacture of High Tension Insulators.	—	—	—	30·0	7·0	3·2	
20	*Government of Saurashtra* .	Industrial Finance Corporation	—	—	—	20.0	—	—	
21	*Government of Bihar* . .	Cottage Industry and Other Schemes	—	—	—	30·0	—	—	
22	ditto	Intensification and Development of Cottage Industry.	—	—	—	2·5	—	—	
23	*Government of West Bengal* .	Scheme for Rehabilitation of Handloom Industry.	—	—	—	4·0	—	—	

VI (*a*) SOCIAL CAPITAL—SCHEMES IN PROGRESS

		Education							
1	*Government of India* (Ministry of Education).	Eastern Higher Technical Institute at Hijli.	1948	1954	5·0	51·1	11·8		
2	ditto	Grants in aid to existing technological institutions.	1948	1953	13·4	18·0	8·1		
3	ditto	Industrial training stipends . .	1949	to continue	1·2	35·7	—	—	
4	ditto	Research training scholarship scheme	1945	to continue	0·6	26·4	—	—	
5	ditto	Engineering and technological education and Research and Higher scientific education.	1950	1957	2·0	58·0	3·2	—	
6	ditto	Development of basic education .	1949	to continue.	3·5	154·3	—	—	
7	ditto	Development of social and adult education.	1949	to continue.	9·6	92·6	—	—	

VI (*a*) SOCIAL CAPITAL—SCHEMES IN PROGRESS—*contd.*

(In millions of rupees)

Sl. No.	Authority undertaking project.	Brief description of project	Date to be begun	Date of completion	Total cost up to March 1951	Cost 1951—57 (six years)			Remarks
						Total	External		
							Hard currencies	Soft currencies	
1	2	3	4	5	6	7	8	9	10
		Education—Contd.							
8	*Government of India* (Ministry of Education)	Development of Universities and institutions of All India importance.	1949	to continue.	5·3	38·3	—	—	
9	ditto	Overseas Scholarships Scheme .	1945	1957	10·2	55·0	54·0		
		Medical							
10	*Government of India* (Ministry of Health).	Upgrading of departments of existing medicinal institutions.	N.A.	1954	0·7	3·8	0·2	0·3	
		Labour and Labour Welfare							
11	*Government of India* (Ministry of Labour).	Industrial Housing Scheme . .	1950	1957	10·0	180·0	—	—	
		Rehabilitation							
12	*Government of India* (Ministry of Rehabilitation).	Rehabilitation Schemes . .	1950	1953	250·0	750·0 *	—	—	* A large number of schemes *e. g.*, housing, training, loans and grants are included in the Rehabilitation programmes.
		Education							
13	*Government of Assam* . .	Buildings for Gauhati University .	1949	1955	1·3	17·3	—	—	
14	ditto	Conversion of Primary Schools into basic schools.	—	—	—	13·5*	—	—	* Includes cost in 1950-51 also.
15	ditto	Training of teachers of Primary Schools at Basic Training Centres.	—	—	0·1	2·7*	—	—	* Includes cost in 1950-51 also.
16	*Government of Bihar* . .	Improvement of those primary schools in which basic schemes cannot be introduced at present.	—	—	—	14·7	—	—	
17	ditto	Opening of Basic education centres	—	—	—	21·2	—	—	

18	ditto	Opening of 15 Higher English schools for girls at District Headquarters.	—	—	—	2·6	—	—
19	ditto	Adult Education Scheme . .	—	—	—	6·0	—	—
20	ditto	Opening of new schools and grants-in-aid for schools situated in the backward areas of the State.	—	—	—	4·6	—	—
21	*Government of Bombay* . .	Strengthening of inspecting staff .	1947	to continue.	1·4	5·3	—	—
22	ditto	Training of teachers . . .	1945	to continue.	3·7	10·3	—	—
23	ditto	Opening of 10 more technical high schools in the State.	1949	to continue.	0·9	4·6	—	—
24	ditto	Establishment of an Engineering College at Ahmedabad.	1948	1952	4·4	3·9	—	—
25	ditto	Establishment of Regional Universities and grants to Universities, Colleges and Research institutions.	1947	to continue.	6·4	7·5	—	—
26	ditto	Improvement of secondary education.	1947	to continue.	5·6	10·8	—	—
27	ditto	Introduction of free and compulsory education.	1946	to continue.	48·0	142·9	—	—
28	ditto	Craft training in primary schools .	1947	to continue.	9·5	14·2	—	—
29	ditto	Social education in selected areas in the State.	1947	to continue.	4·1	14·5	—	—
30	ditto	Physical education for training primary and secondary teachers by holding short term courses.	1947	to continue.	1·0	2·6	—	—
31	*Government of Madhya Pradesh*	Conversion of 92 middle schools into Model Senior basic schools.	1947	1952	1·1	7·0	—	—
32	ditto . .	Opening of 2,500 primary schools .	1949	1953	2·3	12·7	—	—
33	ditto	Building and equipment grants for non-government colleges.	1948	N.A.	0·4	4·0	—	—
34	ditto	Establishment of Government Engineering College at Jubbulpur.	1947	N.A.	2·9	3·8	—	—
35	*Government of Madras* . .	Compulsory elementary education .	1945	to continue.	30·9	31·1	—	—
36	*Government of Orissa* . .	Improvement in the pay of teachers in the existing primary schools.	1946	to continue.	7·5	11·8	—	—
37	ditto	Expansion of Sambalpur College .	1946	to continue.	0·3	3·5	—	—
38	*Government of Punjab* . .	Opening of new training schools for elementary teachers.	1949	N.A.	0·2	5·2	—	—

(In millions of rupees)

Sl. No.	Authority undertaking project	Brief description of project	Date to be begun	Date of completion	Total cost up to March 1951	Cost 195..157 (six years)			Remarks
						Total	External		
							Hard currencies	Soft currencies	
1	2	3	4	5	6	7	8	9	10
39	*Government of Punjab* . .	Opening of new elementary schools and maintenance of 100 per cent. grant to girls' schools.	N.A.	N.A.	0·1	5·1	—	—	
40	*Government of Uttar Pradesh* .	Establishment of 50 Hindustani middle schools for boys.	1946	—	2·6	2·6	—	—	
41	ditto	Opening of normal schools for boys	1946	to continue.	11·2	13·5	—	—	
42	ditto	Opening of high schools for girls .	N.A.	1953	N.A.	3·0	—	—	
43	ditto	Secondary non-recurring grants to non-Government secondary institutions.	N.A.	—	0·3	2·7	—	—	
44	ditto	Introduction and extension of compulsory and primary education in urban areas.	—	—	4·2	4·8	—	—	
45	*Government of West Bengal* .	Increasing salaries of primary school teachers.	1946	to continue.	13·9	30·1	—	—	
46	ditto	Increasing the efficiency of primary school inspection and strengthening of staff.	1949	to continue.	0·2	3·6	—	—	
47	ditto	Primary training colleges . .	1948	to continue.	1·4	2·6	—	—	
48	ditto	Schools for the training of basic school teachers.	1948	to continue.	0·9	9·6	—	—	
49	ditto	Immediate and final plan of Bengal Engineering College at Sibpur.	1946	to cotinue	4·1	7·3	—	—	
50	ditto	Improvement of existing secondary schools.	1948	to continue	4·8	7·8	—	—	
51	ditto	Introducton of basic education	1949	to continue	1·4	34·4	—	—	
52	ditto	Improvement of Deaf and Dumb school at Calcutta.	—	—	—	4·2	—	—	

		Medical							
53	*Government of Assam* . .	Construction of Assam Medical College and building.	1948	1952	5·0	7·3	—	—	
54	*Government of Bihar* . .	Provincialisation of Sadr Hospitals.	—	1952	N.A.	9·5	—	—	
55	ditto	Improvement of Patna Medical College Hospital.	—	—	N.A.	2·7	N.A.	N.A.	
56	ditto	Conversion of Darbhanga Medical School into a college.	—	—	N.A.	3·7	—	—	
57	ditto	Plant for anti-T.B. measures . . .	—	—	—	3·7	—	—	
58	ditto	Two thirty-bedded hospitals and 10 primary units.	—	—	—	5·9	—	—	
59	*Government of Bombay* . .	Establishment of Medical Colleges at Poona and Ahmedabad.	1947	1953	12·5	25·7	0·1	0·3	
60	ditto	Conversion of dispensaries into cottage hospitals.	1948	1953	0·4	3·0	—	—	
61	ditto	Establishment of T.B. hospitals of 200 beds each.	1949	1953	1·6	2·5	—	—	
62	*Government of Madhya Pradesh.*	Establishment of medical college and hospital at Nagpur.	1947	—	7·2*	20·1	—	—	* Cost up to March 1950 only.
63	*Government of Madras* . .	Improvements to Taluq Headquarters Hospitals.	—	—	0·2	3·1	—	—	
64	*Government of Orissa* . .	Expansion of Medical Relief .	1946	—	1·0	3·5	—	—	
65	*Government of Uttar Pradesh* .	Extension of Medical College, Lucknow.	1946	1955	2·7	2·7	0·6	—	
66	*Government of West Bengal* .	Conversion of Campbell Medical School into a college and provision of 100 additional beds.	1948	1953	1·7	3·3	—	—	
67	ditto	Increase in the number of rural dispensaries and establishment of health centres.	1947	1958	12·8	151·4*	—	—	* Includes cost in 1957-58 also.
68	ditto	Maintenance of auxiliary Government hospitals.	1946	1958	45·6	39·4*	—	—	
69	ditto	Rehabilitation and improvement of the existing hospitals.	1948	1954	4·1	11·7	—	—	
70	ditto	Provision of an infectious hospital in Calcutta.	1947	1954	1·4	7·8	—	—	
71	ditto	Establishment of T.B. hospital at Kancharpara and T.B. sanatorium at Digri.	1946	1954	5·0	4·9	—	—	
72	*Government of Madhya Bharat* .	New hospital at Indore . . .	—	—	—	4·5*	—	—	* This includes cost already incurred.

(In millions of rupees)

Sl. No.	Authority undertaking project	Brief description of project	Date to be begun	Date of completion	Total cost up to March 1951	Cost 1951-57 (six years)			Remarks
						Total	External		
							Hard currencies	Soft currencies	
1	2	3	4	5	6	7	8	9	10
		Public Health							
73	*Government of Bihar*	Interim urban, rural public health organisation.		—	—	6·7	—	—	
74	ditto	Pilot anti-Malaria Scheme	—	—	—	3·7	—	—	
75	ditto	Urban water supply—sewage and drainage.	—	—	—	5·0	—	—	
76	*Government of Bombay*	Neersagar Water Supply Scheme	1948	1954	3·5	8·7	—	0·6	
77	ditto	District Health Officer's Scheme	1946	—	9·5	5·1	—	—	
78	*Government of Madhya Pradesh*	Rural water supply	—	—	0·3	21·7*	—	—	*Includes cost in 1950-51 also.
79	*Government of Madras*	Guntur Water Supply Scheme	1947	1955	2·2	5·8	—	—	
80	ditto	Kayalpatnam Composite Water Supply Scheme.	1950	1954	0·8	3·0	—	—	
81	ditto	Palamkota Water Supply Scheme	1950	1958	0·3	2·6	—	—	
82	ditto	Expansion of Malaria Bureau	1945	—	6·1	3·6	—	—	
83	*Government of West Bengal*	Water Supply and drainage in Municipal areas.	1947	1954	2·9	15·1	—	—	
84	ditto	Rural Water Supply Scheme	1946	1954	6·5	7·4	—	—	
85	ditto	B.C.G. vaccination and chest clinic.	1949	—	0·2	3·1	—	—	
86	ditto	Installation of main sewer for the drainage of Calcutta city.	1948	1954	1·5	9·3	—	0·6	
87	*Government of Madhya Bharat*	Ujjain drainage and water works	1948	1955	1·1	6·8	—	—	
88	ditto	Indore drainage scheme	1948	1955	2·9	7·5	—	—	
89	*Delhi Administration*	Establishment of Primary Centres in rural areas.	—	—	0·5	3·0	0·1	0·2	

		Labour and Labour Welfare								
90	*Government of Bombay* . .	Universal literacy among industrial workers.	1947	1953	0·5	3·2	—	—		
91	*Government of Madhya Pradesh* .	Construction of quarters for Government servants.	1949	1952	2·4	2·6	—	—		
		Buildings								
92	*Government of Bihar* . .	Extension of Headquarter Buildings.	—	—	N.A.	7·8	—	—		
93	ditto	Building project for police force .	—	—	—	2·9	—	—		
94	*Government of Bombay* . .	Housing and township for displaced persons at Kalyan, Ahmedabad, Chembur, Mulund, Baroda and Valivadi.	1949	—	16·0	132·0	—	—		
95	ditto	Buildings for Poona Medical College.	1948	1952	5·1	5·9	—	—		
96	ditto	Building for B.J. Medical College and Civil Hospital at Ahmedabad.	1948	1952	7·5	4·7	—	—		
9.	*Government of Orissa* . .	Construction of new capital at Bhuvaneswar.	1948	1953	15·0	39·0	—	—		
98	*Government of West Bengal* .	Habra Baigachi township project for displaced persons.	1949	1953	7·5	12·7	—	—		
99	Ditto	Kanchrapara area development scheme.	1949	1957	11·9	101·6	1·9	0·9		
100	*Government of Pepsu* . .	New township at Tripuri and Patiala	1949	1952	6·0	4·0	—	—		
		Amelioration of Backward Classes								
101	*Government of Bihar* . .	Award of scholarships to scheduled caste students.	—	—	—	3·6	—	—		
102	*Government of Madhya Pradesh*.	Backward area welfare scheme .	1946	—	2·4	7·2*	—	—	* Includes cost in 1950-51 also.	
		Other Schemes								
103	*Government of Madhya Pradesh*.	Establishment of Gram and Nayaya Panchayats.	—	—	1·4	10·8	—	—		
104	*Government of West Bengal* .	Peacetime Fire Service . . .	1945	—	13·7	13·8	—	0·1		
105	*Government of Hyderabad* .	Doolpeth slum clearance scheme .	N.A.	N.A.	0·8	9·2	—	—		
106	ditto	Kukarvadi slum clearance scheme .	N.A.	N.A.	0·2	11·8	—	—		
107	ditto	Baragalli slum clearance scheme .	N.A.	N.A.	0·5	4·7	—	—		
108	*Delhi Administration* . .	Ajmeri Gate slum clearance scheme	1946	—	3·9	3·7	—	—		

(In millions of rupees)

Sl. No.	Authority undertaking project	Brief description of project	Date to be begun	Date of completion	Total cost up to March 1951	Cost 1951-57 (six years)			Remarks
						Total	External		
							Hard currencies	Soft currencies	
1	2	3	4	5	6	7	8	9	10
		Education							
1	*Government of India* (Ministry of Education).	Expansion of Delhi Polytechnic .	—	1956	—	8·0	2·0		
2	ditto	Establishment of Western Technical Institute, Bombay.	1951	1957	—	57·5	13·2		
		Medical							
3	*Government of India* (Ministry of Health).	Establishment of Medical College at Delhi in association with Irwin Hospital.	1951	1953	—	5·6	0·3	0·3	
4	ditto	Construction of permanent building for Nursing College, Delhi.	N.A.	1953	—	2·5	—	—	
5	ditto	Establishment of Medical Institute for Maternity and Child Health.	1951	1952	0·2	4·3		—	
		Labour and Labour Welfare							
6	*Government of India* (Ministry of Labour).	Construction of buildings for Housing and Training Centre.	1950	1957	0·7	6·0	—		
		Education							
7	*Government of Madhya Pradesh*.	Indtroduction of compulsory primary education in selected areas.	—	—	—	4·2	—	—	
8	ditto	Introduction of compulsory education in Municipal and notified area committees.	—	—	—	3·8	—	—	
9	ditto	Taking over and developing 500 primary schools into Indian middle schools in centres where Nyaya Panchayats are proposed to be established.	—	—	—	14·0	—	—	
10	ditto	Award of Middle and High School Scholarships.	—	—	—	5·0	—	—	
11	*Government of Punjab* . .	Extension of duration of primary course from 4 to 5 years.	—	—	—	9·1	—	—	
12	ditto	Establishment of an Engineering College	—	—	—	2·9	—	—	

13	*Government of Mysore* . .	Social Education	—	—	—	3·0			
14	*Government of Travancore and Cochin.*	Establishment of a technological polytechnic.	—	—	—	3·7	—	—	
15	*Ajmer Administration* . .	Compulsory and Basic Education in selected areas.	1950	to continue	N.A.	7·0	—	—	
		Medical							
16	*Government of Madhya Pradesh.*	Opening of 96 rural dispensaries .	—	—	—	4·1	—	—	
17	ditto	Reconstruction and Provincialisation of 22 district sub-divisional H. Q. Hospitals.	—	—	—	5·8	—	—	
18	*Government of Madras* . .	Opening of a new Medical College and the construction of a Collegiate Hospital at Guntur.	—	—	0·1	27·2	—	—	
19	ditto	Establishment of a Medical College at Madurai.	—	—	0·2	12·2	—	—	
20	ditto	Improvement to the H.Q. Hospital Madurai.	—	—	N.A.	3·7	—	—	
21	*Government of Punjab* . .	Construction of a 500 bedded Hospital at Amritsar.	1951	1958	—	6·7*	—	—	* Includes cost in 1957-58 also.
22	ditto	Modernisation of District H.Q. Hospitals.	—	—	—	10·0	—	—	
23	ditto	Modernisation of 15 Tehsil H.Q. Hospitals.	—	—	—	3·8	—	—	
24	ditto	Appointment of an additional Rural Medical Officer to each of the 100 dispensaries.	—	—	—	4·3	—	—	
25	*Government of P.E.P.S.U.* .	Construction of a new Hospital and a Medical College at Patiala.	1951	1956	3·0	7·0	3·0		
26	*Ajmer Administration* . .	Construction of new 200 bedded Hospital.	1955	1957	—	2·5	0·1	0·1	
27	*Delhi Administration* . .	Expansion of Irwin Hospital .	1951	1956	0·4	6·1	0·2	0·3	
28	ditto	Expansion of Safdarjang Hospital .	1951	1958	—	3·0	—	—	
29	ditto	Expansion of Willingdon Hospital and Nursing Home.	1951	1953	—	3·0	0·1	0·1	
30	ditto	Expansion of Lady Hardinge Medical College and Hospital.	1951	1953	0·2	4·3	0·3	0·2	
31	ditto	Silver Jubillee T.B. Hospital . .	1951	1954	0·2	2·9	0·1	0·1	
		Public Health							
32	*Government of Assam* . .	Water supply scheme for urban areas	1951	—	—	3·3	—	—	
33	*Government of Madhya Pradesh.*	Water supply for 32 towns . .	—	—	—	23·4	—	—	

(In millions of rupees)

Sl. No.	Authority undertaking project	Brief description of project	Date to be begun	Date of completion	Total cost up to March 1951	Cost 1951-57 (six years)			Remarks
						Total	External		
							Hard currencies	Soft currencies	
1	2	3	4.	5	6	7	8	9	10
34	*Government of Madras* . .	Improvement to Madurai Drainage Scheme.	1951	1960	—	2.8	—	—	
35	ditto	Trichinopoli Drainage Scheme .	1951	1960	—	4.1	—	—	
36	ditto	Tuticorin Drainage Scheme . .	1951	1958	—	3.0	—	—	
37	ditto	Kozhikode Drainage Scheme .	—	—	—	3.0	—	—	
38	ditto	Masulipatnam Drainage Scheme .	—	—	—	3.7	—	—	
39	*Government of Madras* . .	Tirupur Water supply scheme .	—	—	—	6.2	—	—	
40	ditto	Rajahmundry Drainage Scheme .	—	—	—	2.5	—	—	
41	ditto	Vijayanagaram Drainage Scheme .	—	—	—	3.0	—	—	
42	ditto	Dindigal water supply scheme .	1951	1957	—	3.0	—	—	
43	*Government of Madhya Bharat* .	Drainage and Water Works Project, Guna Town.	—	—	—	3.1	—	—	
44	ditto	Drainage and Water Works—Neemuch, Bagana.	—	—	—	3.0	—	—	
45	ditto	Drainage and Water Works, Ratlam	—	—	—	11.0	—	—	
		Labour and Labour Welfare							
46	*Government of Bombay* . .	Anti-T.B. Sanatoria . . .	1951	1953	nil	3.5	—	—	
47	*Government of Madhya Pradesh* .	Construction of quarters for sweepers	N.A.	N.A.	N.A.	3.8	—	—	
48	*Government of Uttar Pradesh* .	Housing Scheme for workers in Sugar factory.	1951	N.A.	0·5	6.0	—	—	
		Buildings							
49	*Government of Bombay* . . .	Construction of Police constabulary quarters at Poona.	—	—	—	2.5	—	—	
50	ditto	Extension of Central Offices, Poona.	1951	1955	—	3.4	—	—	
51	ditto	Central Building for Civil Offices at Ahmedabad.	—	—	—	6.4	—	—	
52	*Bhopal Administration* . .	Administrative Buildings for Bhopal State.	—	1956	0·2	6.8	—	—	

		Other Schemes				
53	*Government of Madhya Pradesh*	Training of would-be Panchas of Panchayats	—	1952	2·6	2·9
54	*Government of Hyderabad*	Yakubpura slum clearance and improvement Scheme.	—	—	N.A	14·4
		Zoopark slum clearance scheme	—	—	—	3·3
		Chintalkunta slum clearance and improvement scheme	—	—	—	11·0

GIPD—M—439 M. of Finance—12-12-50—500